

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

RS-BRS-404(3)
ISSUE I

FHWA REGION	STATE	PROJECT	
3	OHIO	RS-BRS-404(3)	51

PAULDING COUNTY
PAU-637-15.63

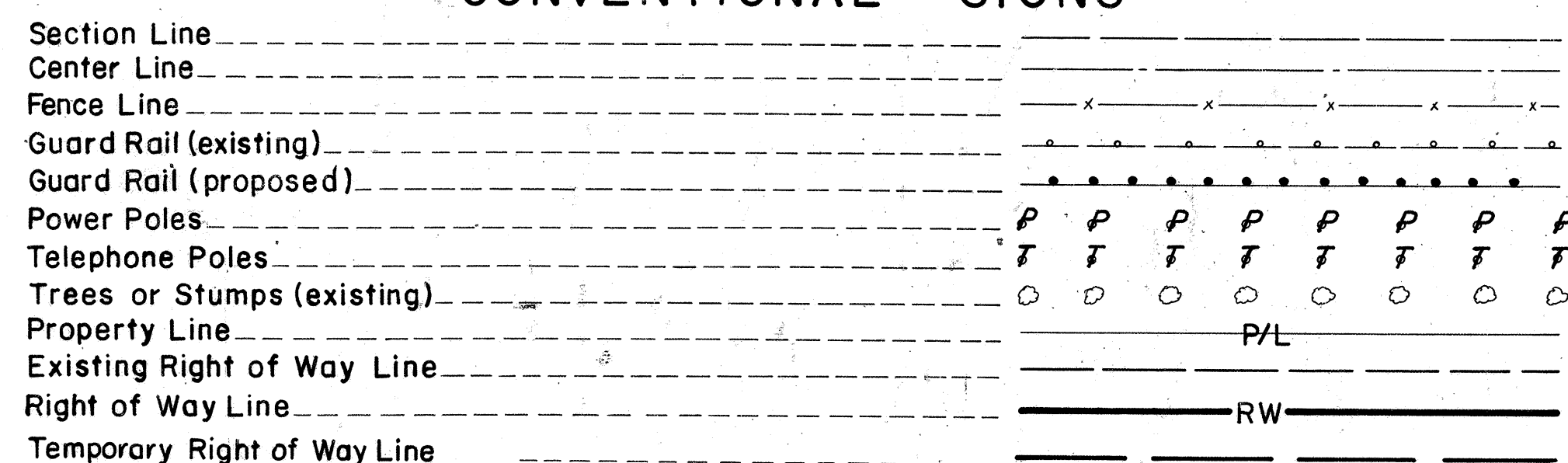
PAU-637-15.63
AUGLAIZE TOWNSHIP
PAULDING COUNTY

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DESIGN DESIGNATION

Current ADT (1982) = 1429
 Design Year ADT (2002) = 2480
 DHV = 248
 D (Directional Distribution) = 60%
 T (Percent B & C Trucks) = 5%
 V (Design Speed) = 55 mph

CONVENTIONAL SIGNS



INDEX OF SHEETS

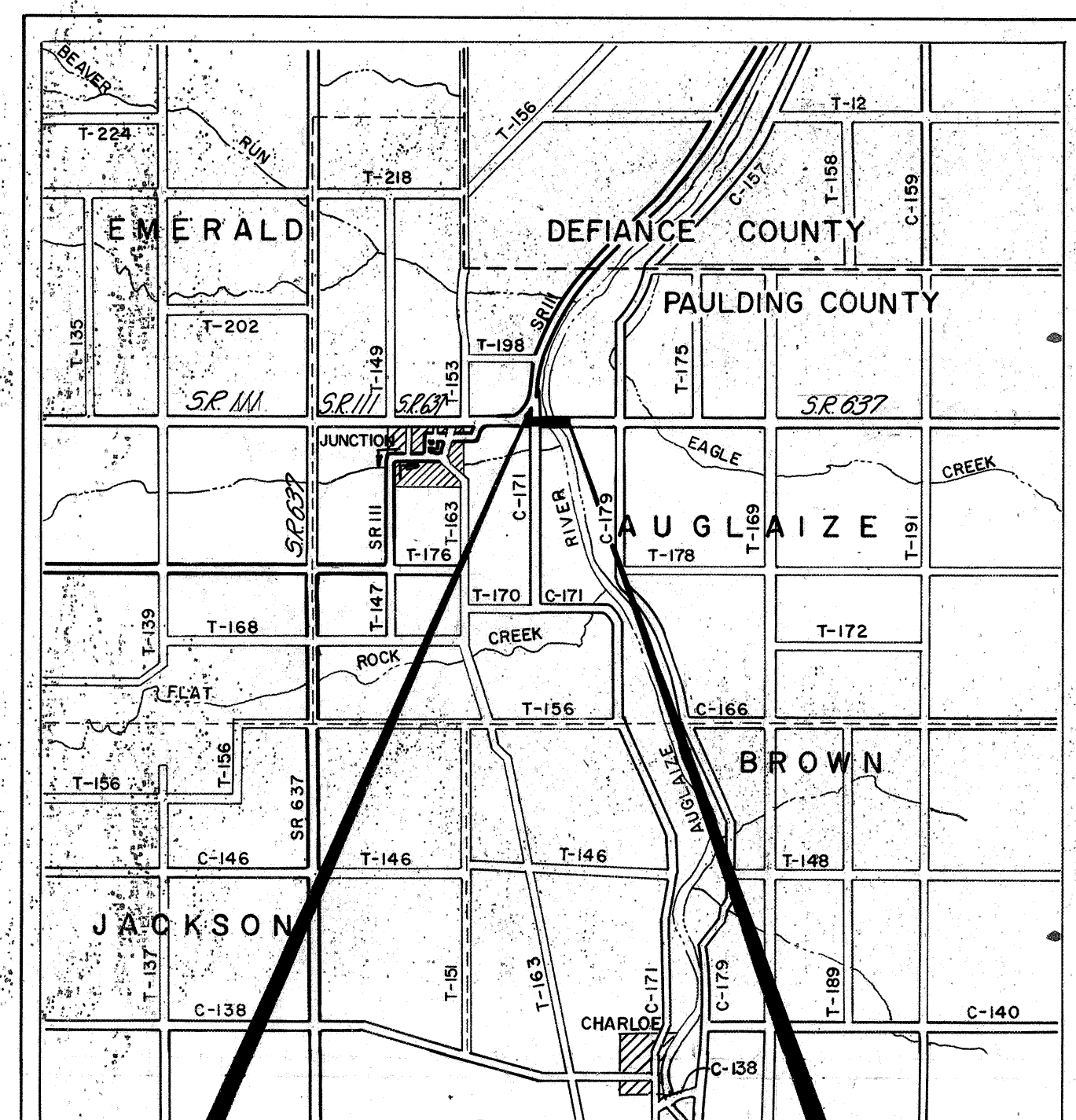
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LINE DATA

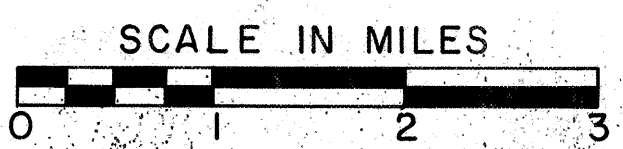
	STATION	LENGTH
Begin Project (RS)	23 + 00	
		324.52
SUSPEND (RS) & BEGIN (BRS)	26 + 24.52	
		751.96
END (BRS) & RESUME (RS)	33 + 76.48	
		298.52
END PROJECT (RS)	36 + 75	
TOTAL PROJECT		1375.00 LF. OR 0.260 Mi.
BEGIN WORK	22 + 82	
		1443.00
END WORK	37 + 25	
TOTAL WORK		1443.00 LF. OR 0.273 Mi.

PLAN PREPARED BY:
STICKLEN-BELSHIEM & ASSOC.
WORTHINGTON, OHIO

PLANS PREPARED UNDER THE DIRECTION OF:
Don J. Leamon
REGISTERED ENGINEER # 22290 OHIO



BEGIN PROJECT STA. 23+00.00 END PROJECT STA. 36+75.00



PORTION TO BE IMPROVED
 STATE HIGHWAYS
 COUNTY ROADS
 TOWNSHIP ROADS
 DETOUR MAP
 SCALE IN FEET
 PLANS
 PROFILE: HORIZONTAL
 PROFILE: VERTICAL
 CROSS SECTIONS

1981 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway and that detours will be provided as indicated on the plans.

Approved Max D. Moorhead
 Date 1-30-81 District Deputy Director of Transportation

Approved Robert B. Pfeiffer
 Date 4-2-81 Engineer, Bureau of Bridges and Structural Design

Approved Wayne H. Kauble
 Date 3-1-83 Chief Engineer, Planning and Design

Approved Warren J. Smith
 Date 3-1-83 Director, Department of Transportation

**DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

APPROVED:

DIVISION ADMINISTRATOR DATE

STANDARD CONSTRUCTION DRAWINGS					SUPPLEMENTAL SPECIFICATIONS		
BP-5	7-18-81	GR-1	2-5-82	LA-1	6-1-79	AS-1-81, SHEET No. 1, 2811-27-81	
BP-6	6-1-85	GR-2B	2-5-82			DBR-2-73	824 10-8-82
BP-7	12-6-76	GR-3	2-5-82	MC-1	6-13-69	TC-41.20	3-26-79 836 3-12-75
BP-2	12-6-76	GR-4	2-5-82	MC-3	6-1-73	TC-42.20	3-26-79 927 10-19-81
CB-2-2-A & B	5-1-79			MC-4	7-26-76	TC-52.10	4-3-79 936 4-19-82
CB-5	5-1-79	HW-4A	4-1-80	MC-II	8-1-78		1001 1-3-77
CB-6	5-1-79	HW-4B	4-1-80			SD-1-69, SHEET No. 1,	6-12-69

Project: RS-BRS-404(3)
 Date of Letting: _____ 19____, Contract No. _____

EARTHWORK LIMITS shown are approximate. Actual slopes shall conform to plan cross-sections.

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FHWA REGION	STATE	PROJECT
5	OHIO	

27
51

PAULDING COUNTY

PAU-637-15.63

Junction Quadrangle
Lot. = 41°-11'-41"
Long. = 84°-26'-48"

EXISTING STRUCTURE

SPAN 1 (WEST)

TYPE: Through Whipple Truss
SPAN: 133' clear (143' ± % brgs.)
ROADWAY: 19.2' % truss (17.5' 1/4 railing)
SKEW: 25° ± Right Forward
LOADING: 65% Reduction of Legal Loads
DECK: Asphalt filled corrugated steel plate
SUBSTRUCTURE: Stone and or concrete gravity wall
APPROACH SLAB: None
DATE BUILT: Prior to 1900
(To be removed)

SPAN 2,3,4,5 (EAST)

TYPE: Through Pratt Truss
SPAN: 4 @ 135' ± clear (4 @ 143' % brgs.)
ROADWAY: 19.4' % truss (17.2' 1/4 railing)
SKEW: 18 1/2° ± to 25° Right Forward
LOADING: 55% Reduction of Legal Loads
DECK: Asphalt filled corrugated steel plate
SUBSTRUCTURE: Stone and or concrete gravity wall
APPROACH SLAB: None
DATE BUILT: 1912
(To be removed)

TRAFFIC: 2001 ADT = 2,480
ADTT = 124

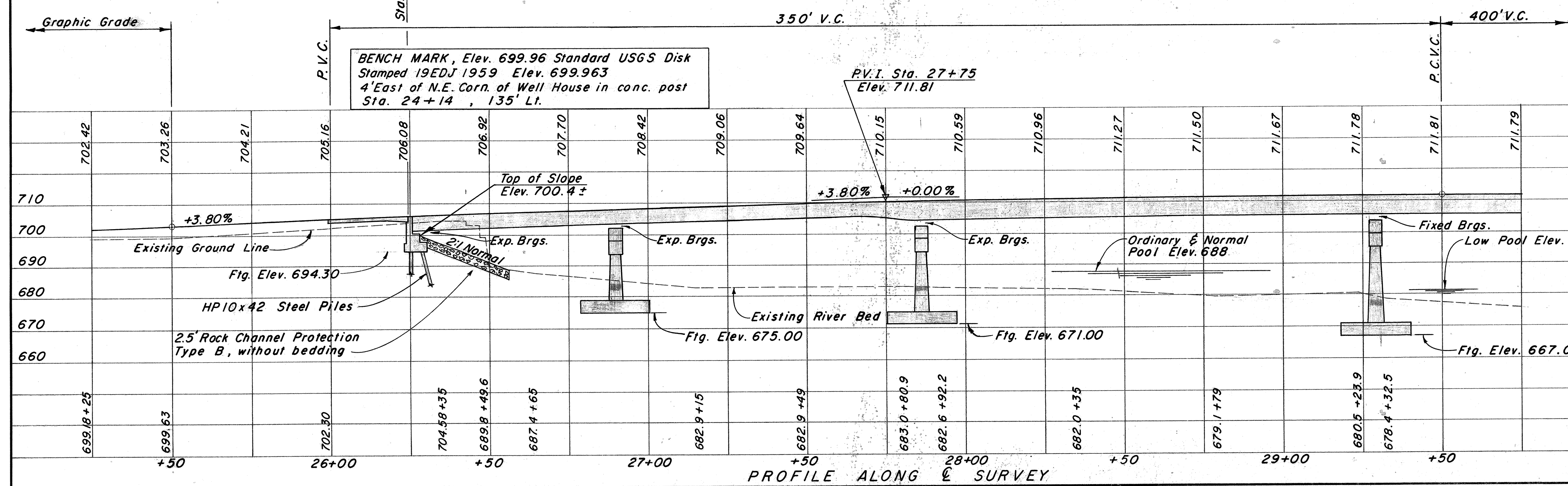
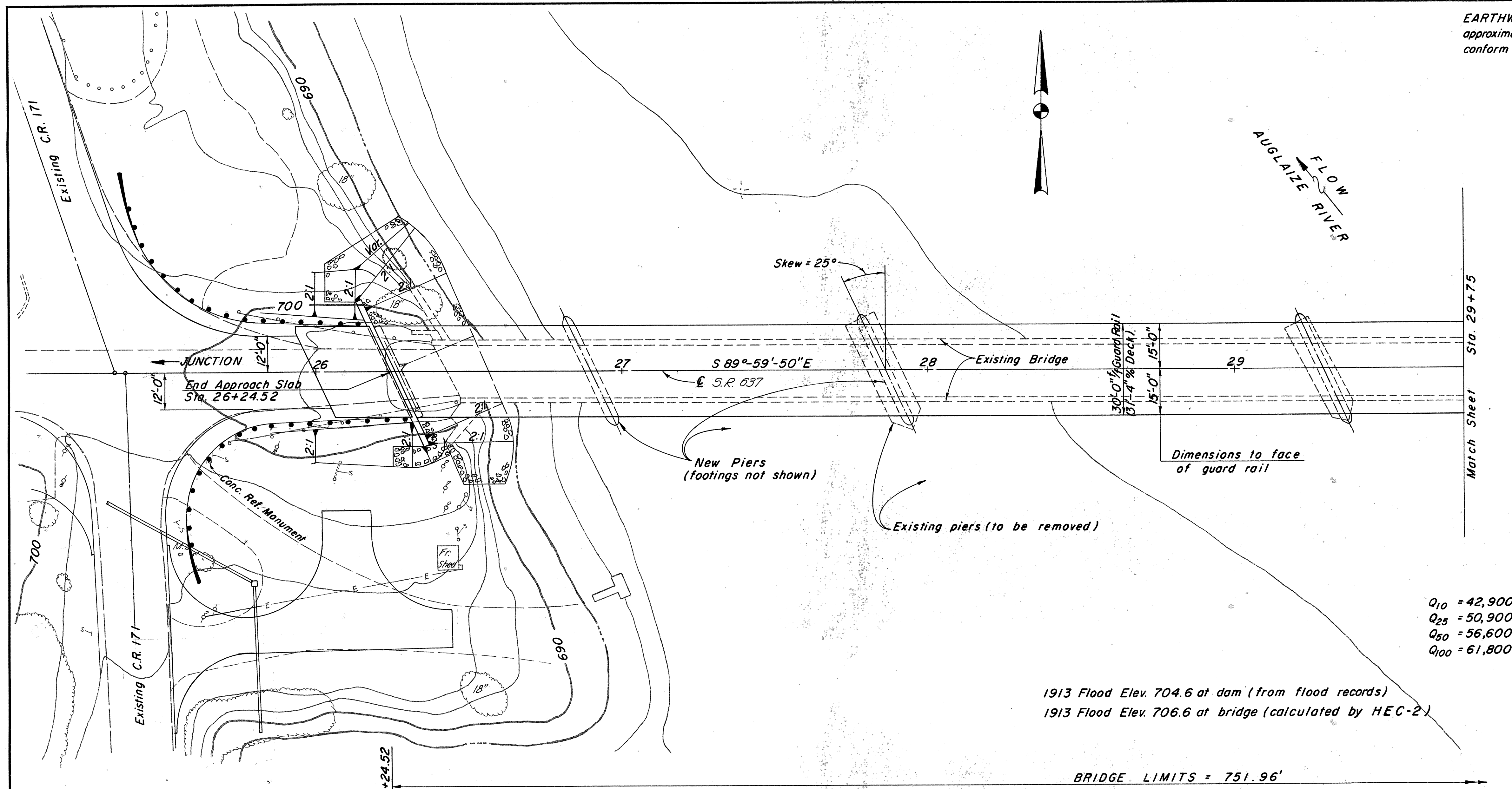
DRAINAGE AREA = 2,276 sq. mi.

Q₁₀ = 42,900 cfs, V₁₀ = 3.5 'sec., Elev. 698.7
Q₂₅ = 50,900 cfs, V₂₅ = 3.9 'sec., Elev. 700.0
Q₅₀ = 56,600 cfs, V₅₀ = 4.1 'sec., Elev. 700.9
Q₁₀₀ = 61,800 cfs, V₁₀₀ = 4.3 'sec., Elev. 701.6

Clears 25 yr. H.W. by 1.7'

1913 Flood Elev. 704.6 at dam (from flood records)
1913 Flood Elev. 706.6 at bridge (calculated by HEC-2)

BRIDGE LIMITS = 751.96'



PROPOSED STRUCTURE

TYPE: 7 span continuous steel (ASTM A588) girder with reinforced concrete deck, and substructure
SPANS: 63'-96'-143'-143'-143'-96'-63' % brgs.
ROADWAY: 30' 1/4 guardrail (31'-4" % deck)
SKEW: 25° Right Forward
LOADING: HS-20-44 and Alternate Military Loading Case II
WEARING SURFACE: Monolithic Concrete
APPROACH SLABS: AS-1-81 (25' long)
ALIGNMENT: Tangent

STICKLEN - BELSHEIM & ASSOCIATES
ENGINEERS
WORTHINGTON OHIO

SITE PLAN
BRIDGE NO. PAU-637-1563
PAULDING COUNTY S.R. 637
OVER
AUGLAIZE RIVER
PAULDING CO. STA. 26+24.52
33+76.48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
T.R.O.	R.D.Y.	R.D.Y.	AWL	T.R.O.	5-30-80	
			RG.	D.I.C.	6-2-80	

GENERAL NOTES

REFERENCE shall be made to Standard Drawings

DBR-2-73 dated 4-10-73,
AS-1-81 sheets 1,2&3, dated 11-27-81,
SD-1-69 sheet No. 1 dated 6-12-69

and to Supplemental Specifications

824 dated 10-8-82
836 dated 3-12-75 and
927 dated 10-19-81.

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway Officials, 1977, including the 1978, and 1979 Interim Specifications and the Ohio "Supplement" to these specifications.

DESIGN DATA:

Design Loading - HS-20-44 Case II and the Alternate Military Loading

Monolithic wearing surface thickness is assumed for design purposes to be 1"

Deck Protection Method - Epoxy coated reinforcing steel, top mat only

Concrete Class C - compressive strength 4,000 p.s.i. for substructure
Concrete Class S - compressive strength 4,500 p.s.i. for superstructure
Structural Steel - ASTM A588 - unit stress 27,000 p.s.i.
Reinforcing Steel - ASTM A615, A616 or A617 Grade 60 - minimum yield strength 60,000 p.s.i.

REMOVAL OF EXISTING STRUCTURE: The existing bridge shall be removed in accordance with Item 202.03 of the Construction and Material Specifications. Suitable waste masonry may be placed as bank protection as directed by the Engineer.

EMBANKMENT CONSTRUCTION: The embankments shall be constructed to the level of the subgrade for a minimum distance of 100 feet back of the Rear Abutment. Excavation may then be made for this abutment and piles driven.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the Owner. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either would be held to a minimum.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the rear abutment.

BRIDGE SEAT REINFORCING: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes or the pre-setting of bearing anchors.

BEARING ANCHORS: At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast in place.

EMBANKMENT CONSTRUCTION FOR THE FORWARD ABUTMENT:

The approach embankment shall be constructed to Elev. 685.0 and up on a 1.5 to 1 slope, as shown on Sheet No. 218, to the subgrade elevation for a minimum distance of 75 feet back of the footing before any portions of the abutment are constructed. Before the backwall is constructed the embankment shall be placed up to the level of the subgrade with a 1:1 slope from the bridge seat. Payment for backfill and new embankment, 503.10, required in excess of 503, 518 and 203 quantities shall be included in the price bid for Item 203 Embankment.

FOUNDATION BEARING PRESSURE: Forward abutment footing is designed for a maximum bearing pressure of 3 tons per sq. ft. Pier footings are designed for a maximum bearing pressure of 5 tons per sq. ft.

ESTIMATED QUANTITIES BRS Funding

ITEM	TOTAL	UNIT	DESCRIPTION	BRS Funding				
				Rear Abut.	Fwd. Abut.	Piers	Superst.	General
202	Lump		Structure removed					Lump
503	1,537	Cu.Yds.	Unclassified excavation	89	205	1,243		
503	Lump		Cofferdams, cribs and sheeting					Lump
505	Lump		Test pile					Lump
507	170	Lin.Ft.	Steel piles, HP 10x 42	170				
509	236,587	Lbs.	Reinforcing steel, grade 60	4,532	18618	147,773	65,664	
511	143	Cu.Yds.	Class C concrete, abutments above footings	37	106			
511	601	Cu.Yds.	Class C concrete, piers above footings			601		
511	137	Cu.Yds.	Class C concrete, abutment footings	27	110			
511	556	Cu.Yds.	Class C concrete, pier footings			556		
511	725	Cu.Yds.	Class S concrete, superstructure (See Proposal Note)				725	
513	810,000	Lbs.	Structural steel A588 (AISC Category III)				810,000	
517	1,503.92	Lin.Ft.	Railing (deep beam rail with steel tubular backup and steel posts and bolts)				1,503.92	
518	53	Lin.Ft.	6" perforated, helical corrugated steel pipe, 707.01	53				
518	28	Lin.Ft.	6" non-perforated, helical corrugated steel pipe, including specials 707.01	28				
518	96	Cu.Yds.	Porous backfill	24	72			
518	50	Lin.Ft.	4" PVC pipe		50			
824	85,509	Lbs.	Epoxy coated reinforcing steel, Grade 60 (See Proposal Note)				85,509	
Special	2,693	Sq.Ft.	Protection of concrete surfaces	268	495	8,930		

Quantities Calculated By RG-5-27-80
Quantities Checked By GT-5-29-80

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ENGINEERS
WORTHINGTON OHIO

GENERAL NOTES &
ESTIMATED QUANTITIES
BRIDGE NO. PAU-637-1503
OVER
AUGLAIZE RIVER

PAULDING CO. STA. 26+24.52
33+76.48

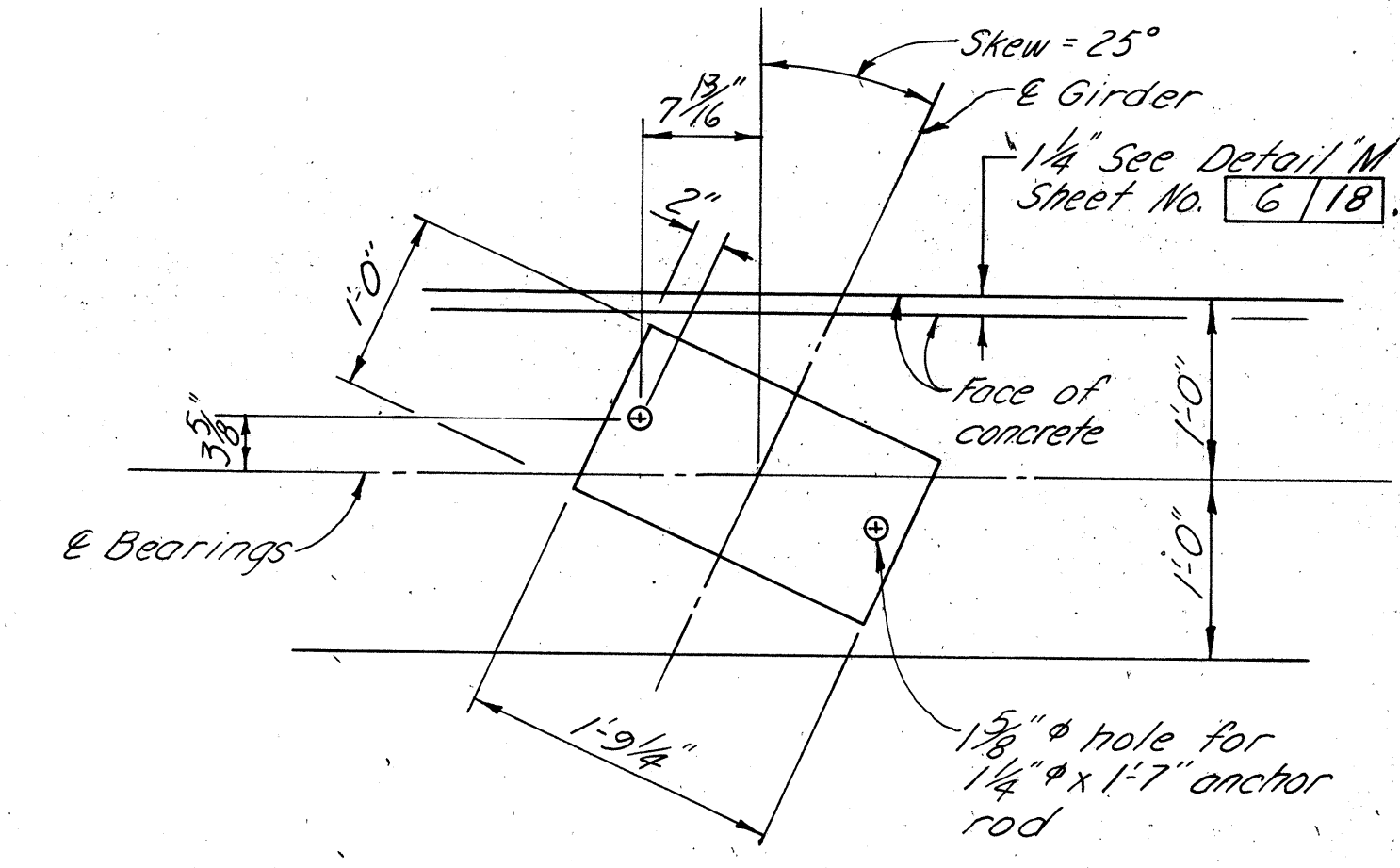
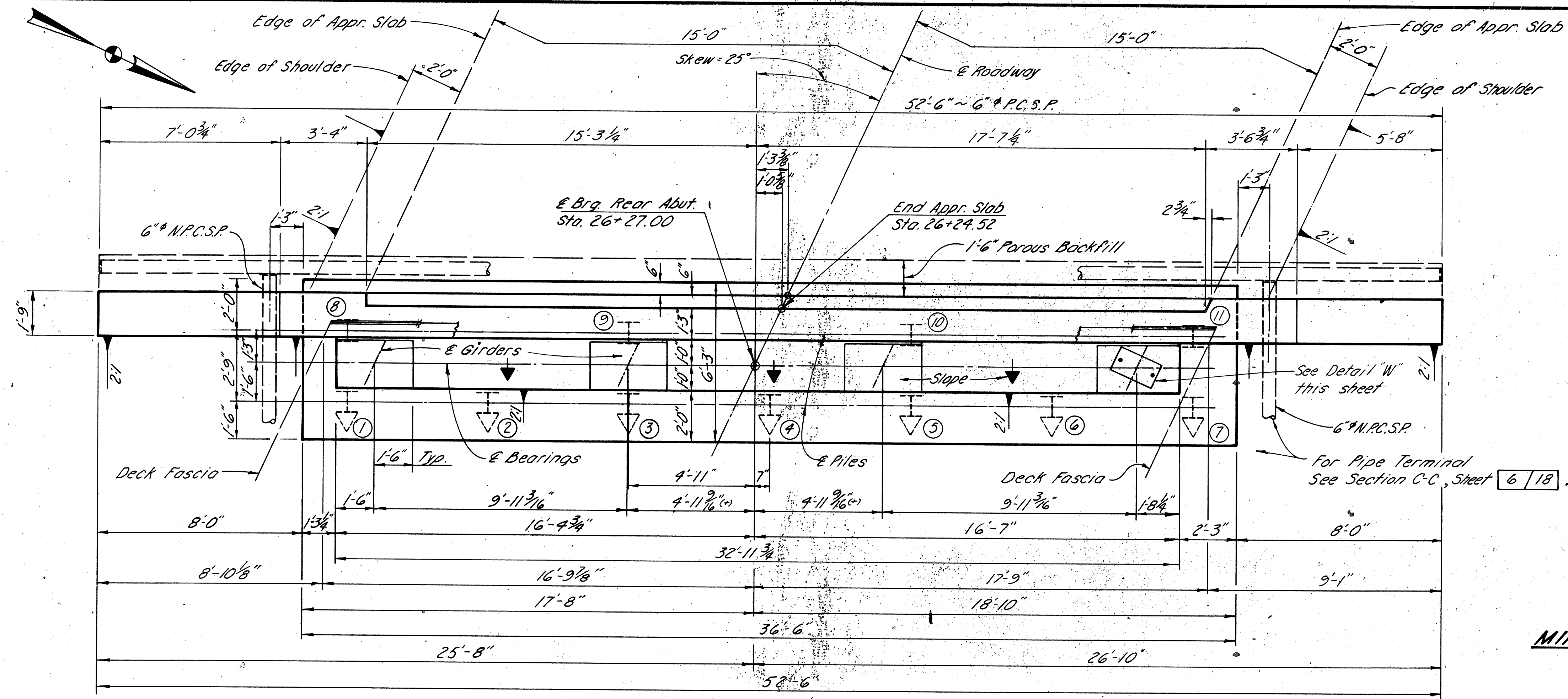
DESIGNED T.R.O. R.G.	DRAWN R.D.Y.	TRACED	CHECKED R.G. G.T.	REVIEWED T.R.O. D.I.C.	DATE 5-30-80 6-2-80	REVISED
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F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

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PAULDING COUNTY
PAU-637-15.63

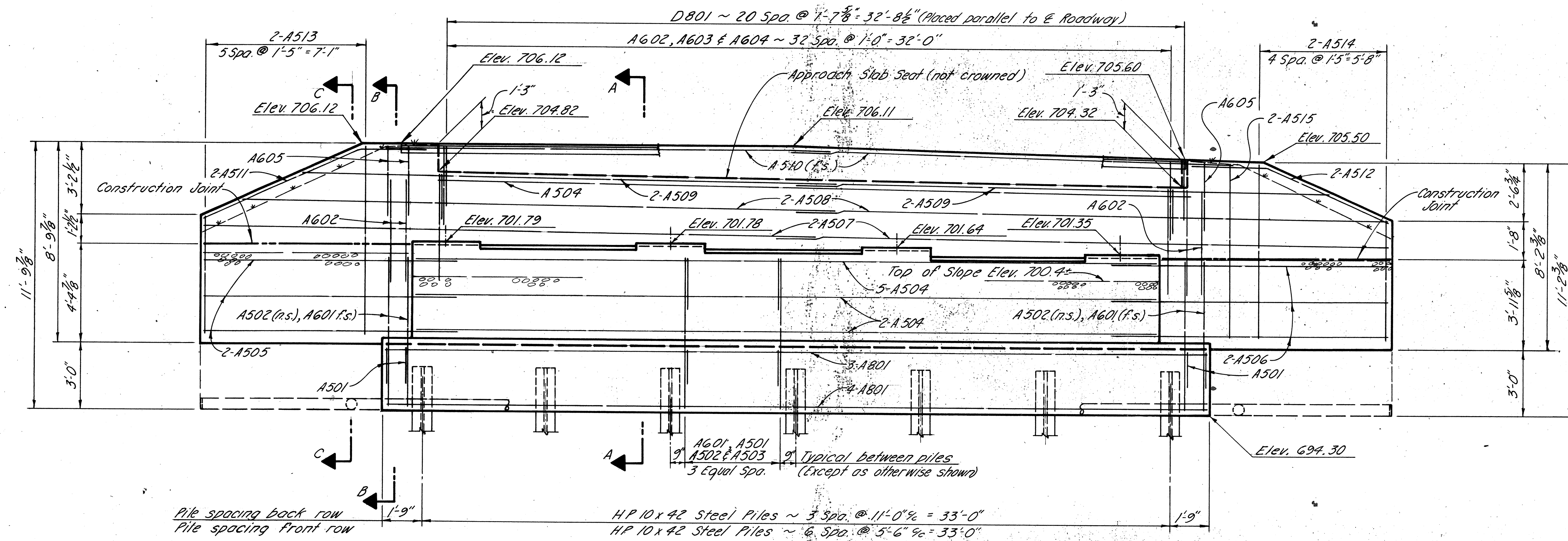


E-100 BEARING
DETAIL "W"

MINIMUM REINFORCING BAR SPICE LAP LENGTH

BAR No.	HORIZONTAL	VERTICAL
5	2'-5"	1'-8"
6		2'-0"

PLAN



LEGEND

- P.C.S.P. = Perforated Corrugated Steel Pipe
- N.P.C.S.P. = Non-Perforated Corrugated Steel Pipe
- n.s. = near side
- f.s. = far side
- ③ = Indicates pile number
- ▽ = Indicates battered piles

For Sections, Details, and Notes
See Sheet 6/18

ELEVATION

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**REAR ABUTMENT
DETAILS**

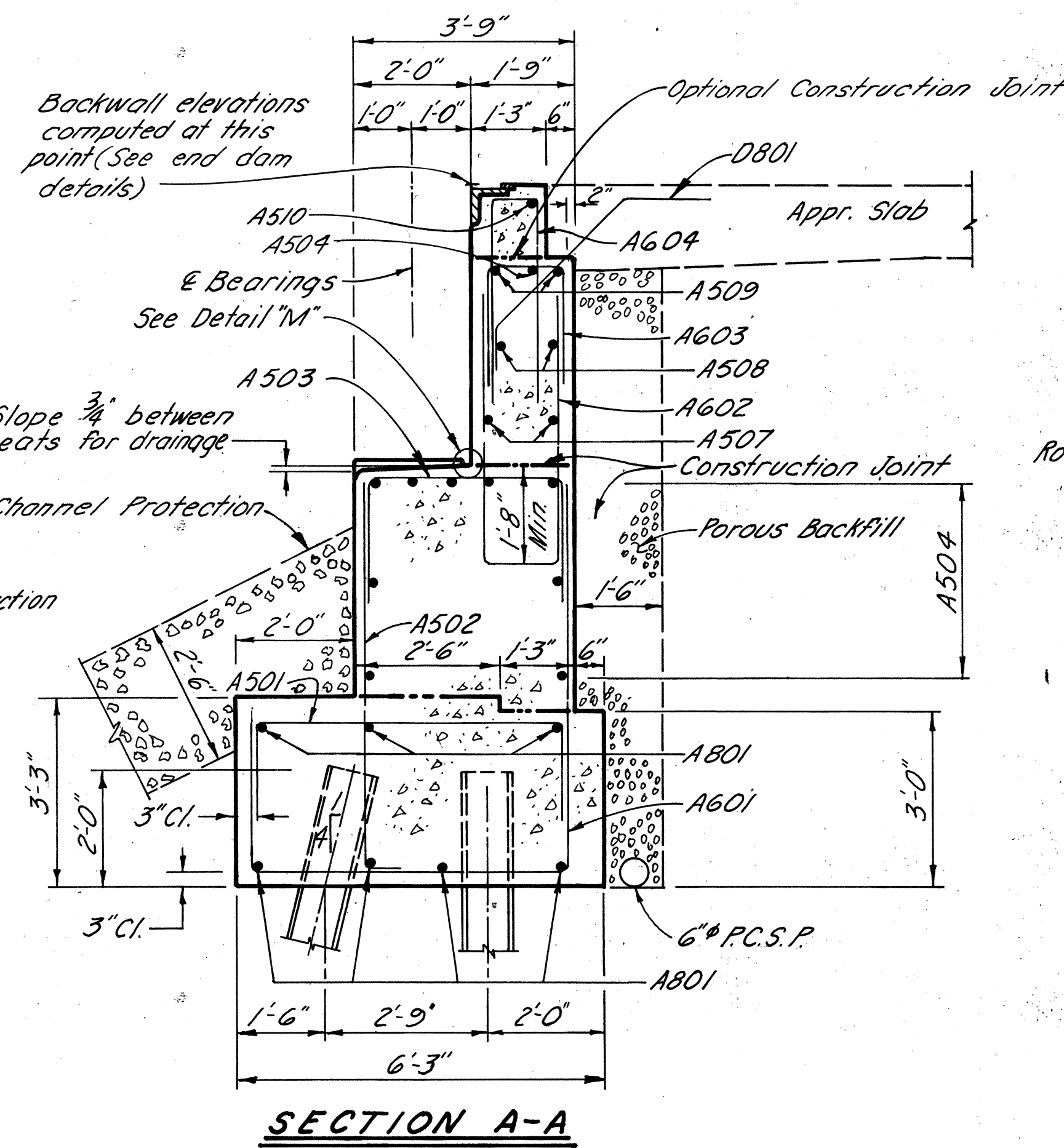
BRIDGE NO. PAU-637-1563
OVER
AUGLAIZE RIVER

PAULDING CO. STA. 26+24.52
33+76.48

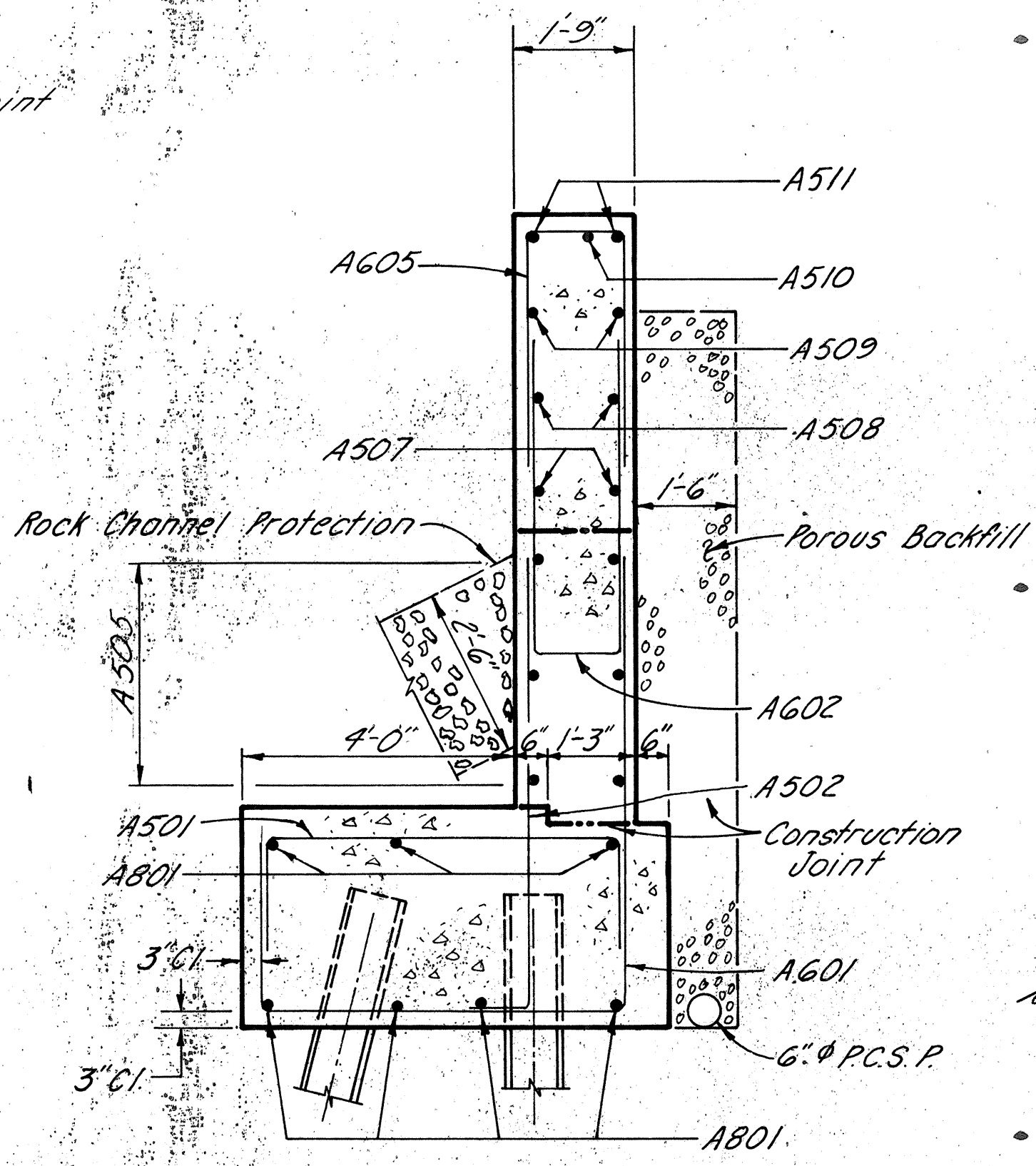
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				D.I.C.	6-2-80	

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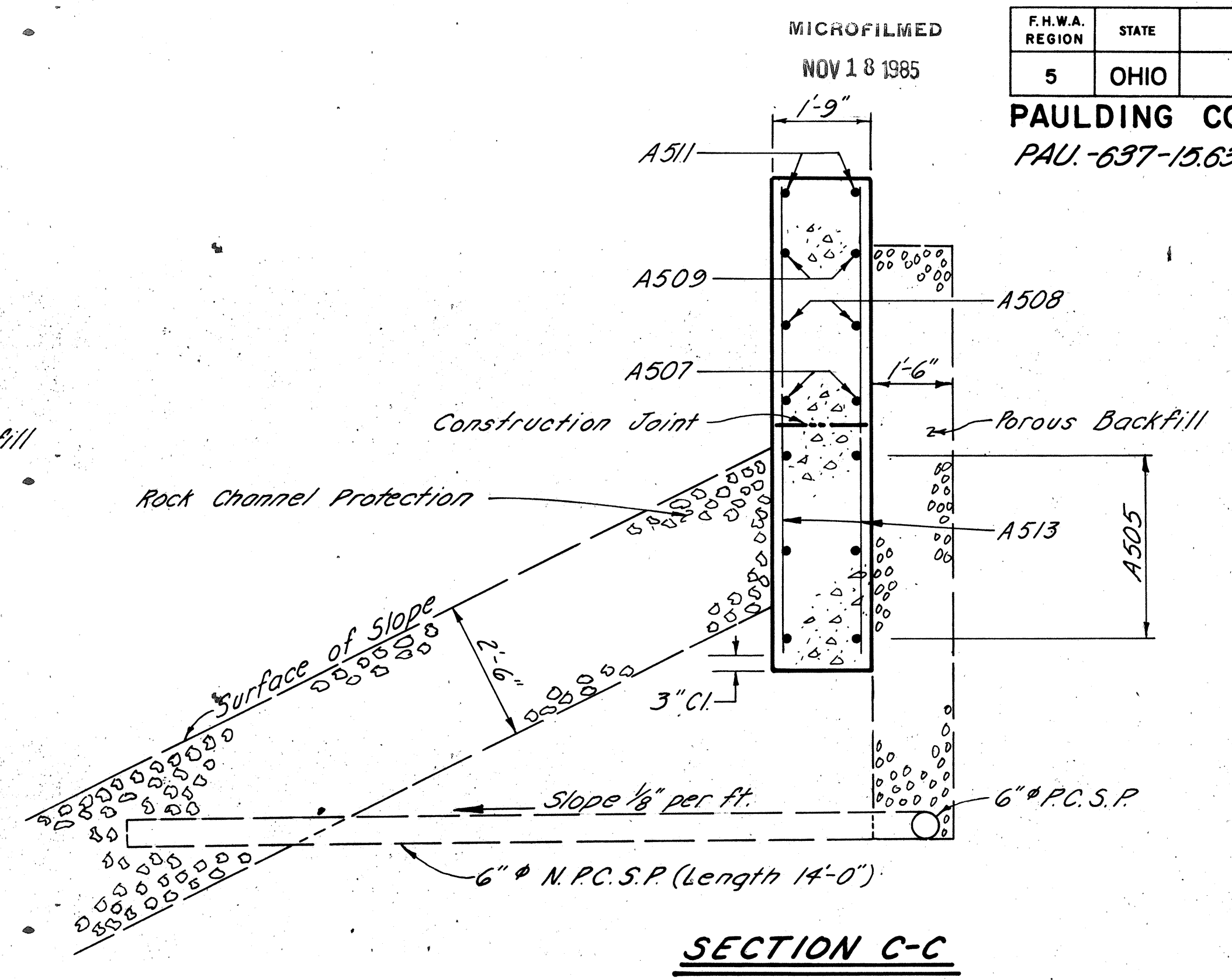
PAULDING COUNTY
PAU-637-1563



SECTION A-A



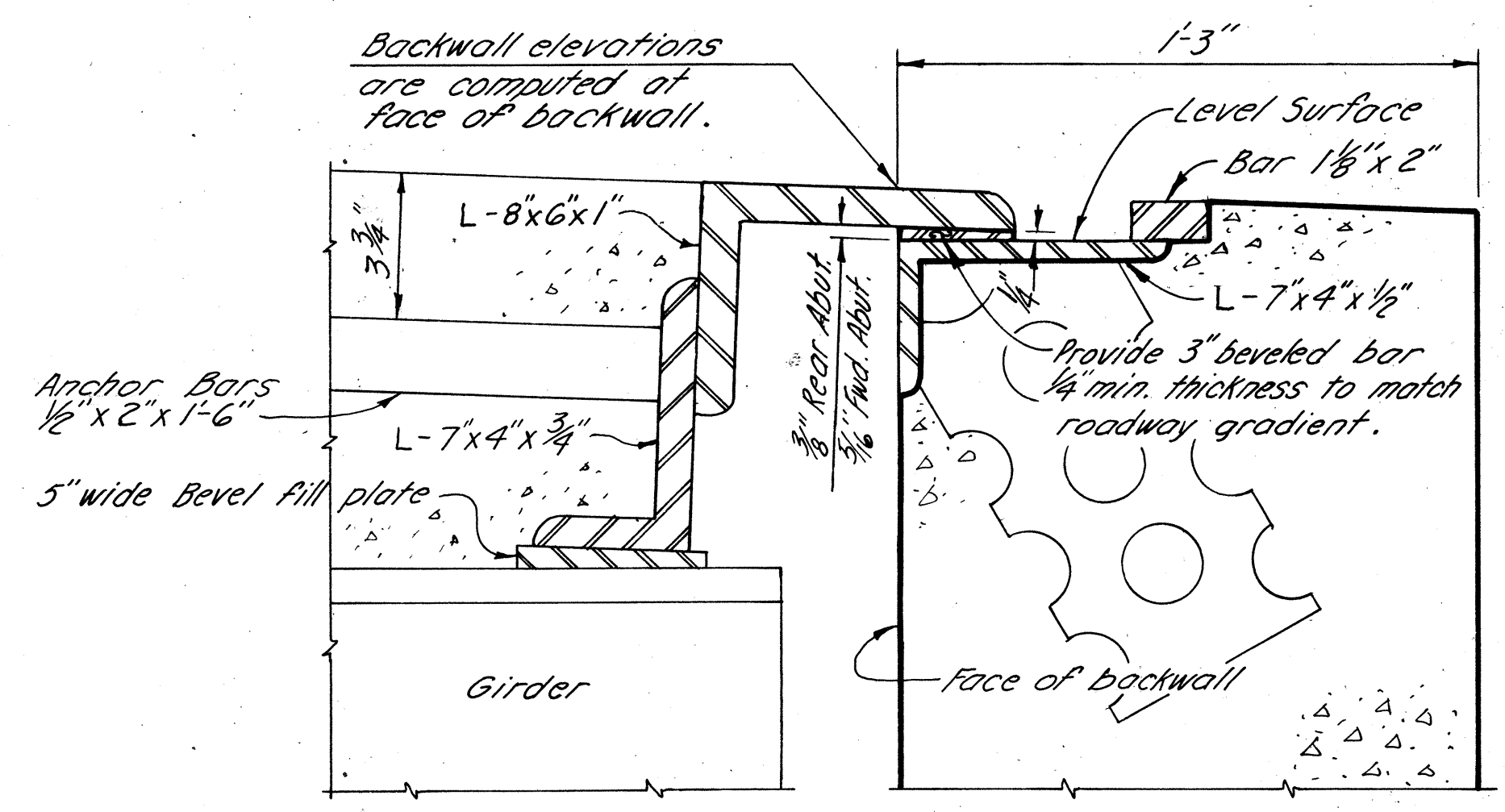
SECTION B-B



SECTION C-C

BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete above the bridge seat or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.

POROUS BACKFILL shall extend upward to the plane of the subgrade and laterally to the ends of the wingwalls.



END DAM DETAILS

For additional end dam details see Standard Drawing No. SD-1-69.

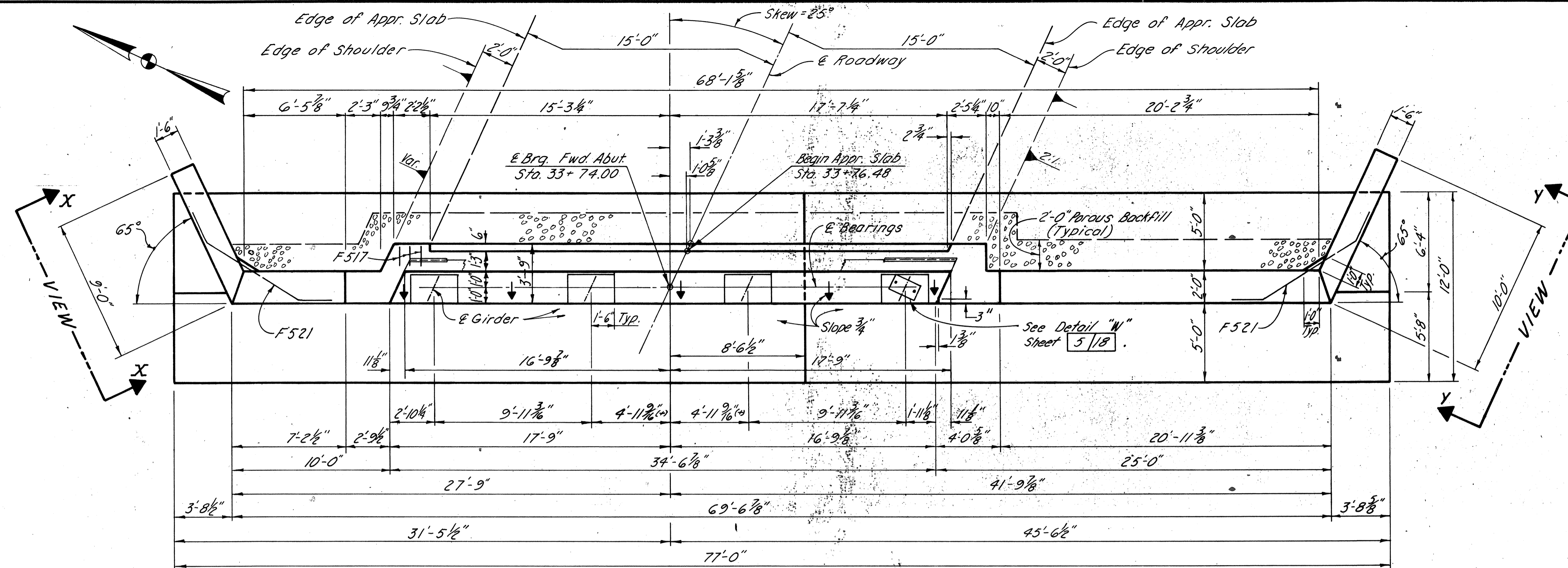
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REAR ABUTMENT DETAILS						
BRIDGE NO. PAU-637-1569 OVER AUGLAIZE RIVER						
PAULDING CO.						STA. 26+24.52 33+76.48
DESIGNED R.G.	DRAWN R.D.Y.	TRACED	CHECKED T.R.O.	REVIEWED T.R.O.	DATE 5-30-80	REVISED 6-2-80

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NOV 18 1965

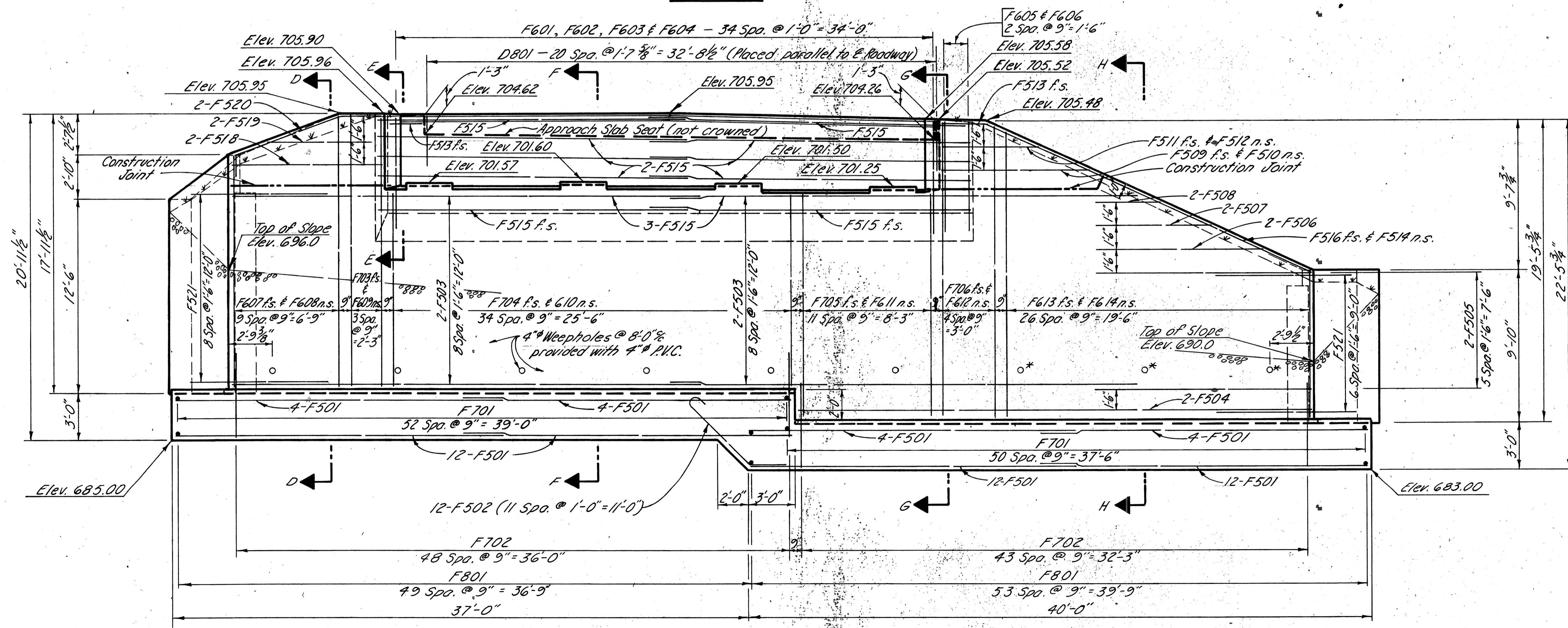
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

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PAULDING COUNTY
PAU-637-15.63



PLAN



ELEVATION

- NOTES**
- * 4" P.V.C. are not required.
 - 4" P.V.C. Pipes:
Inlet Elev. 690.0 & Outlet Elev. 689.0
 - SPECIAL CARE** shall be taken in placing the rock channel protection to protect the 4" P.V.C. from being damaged.
 - POROUS BACKFILL**, 2 Feet thick, shall extend up to the plane of the subgrade and laterally to the ends of the wingwalls.
 - BACKWALL CONCRETE**: In addition to the provisions of 511.08, backwall concrete above bridge seat or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.

LEGEND
n.s. = near side
f.s. = far side

For SECTIONS and VIEWS
see Sheet No. 8/18

MINIMUM REINFORCING BAR SPLICE LAP LENGTH

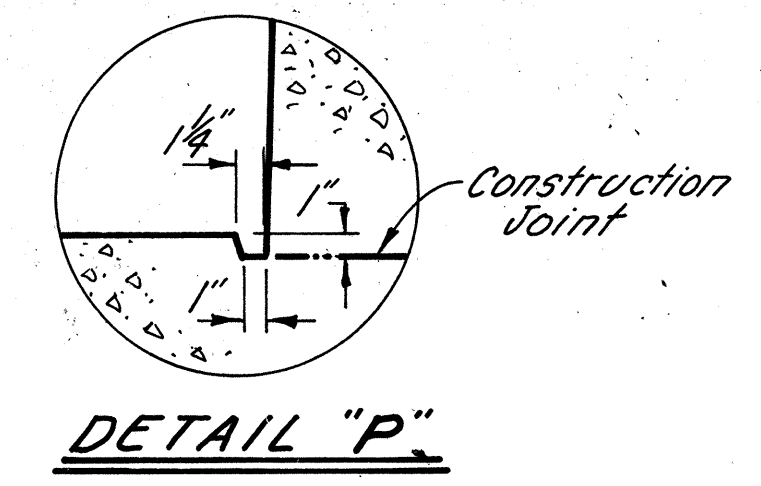
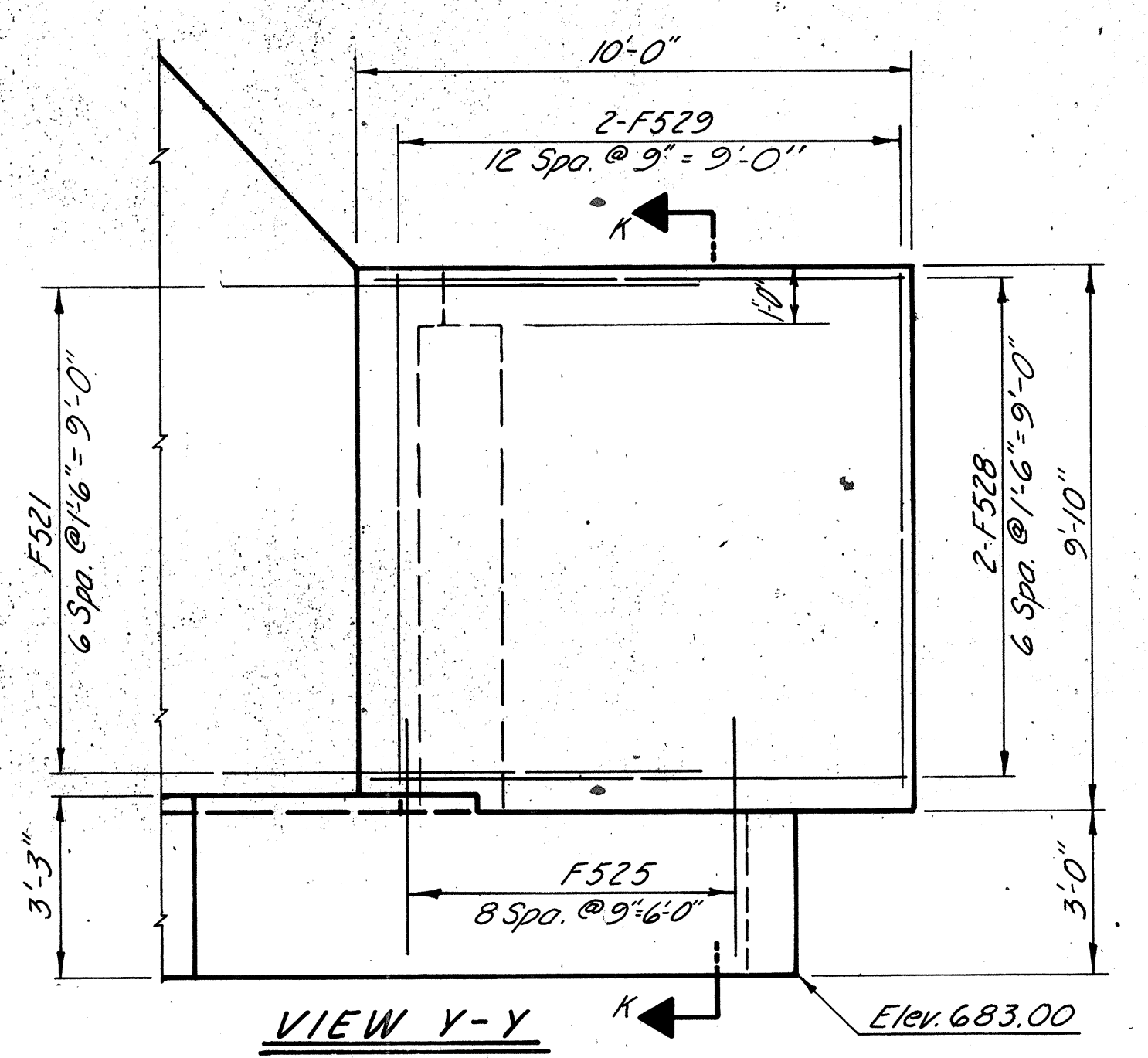
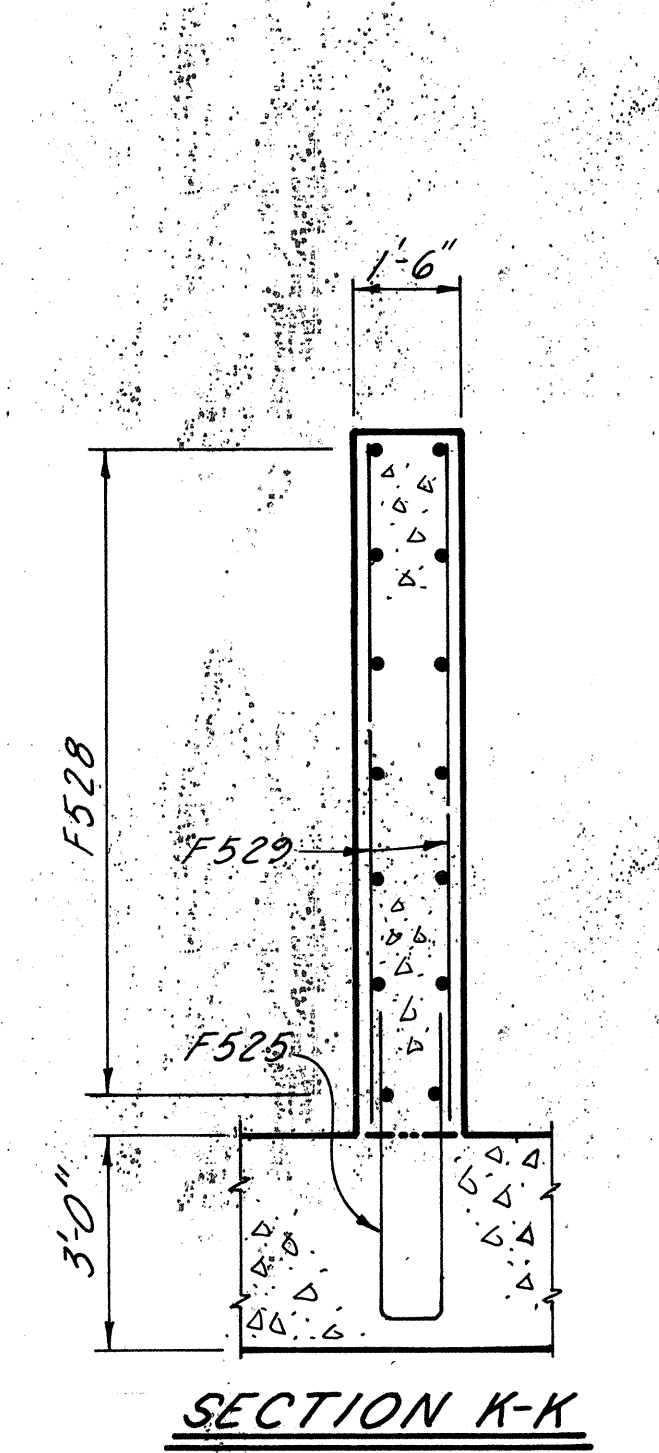
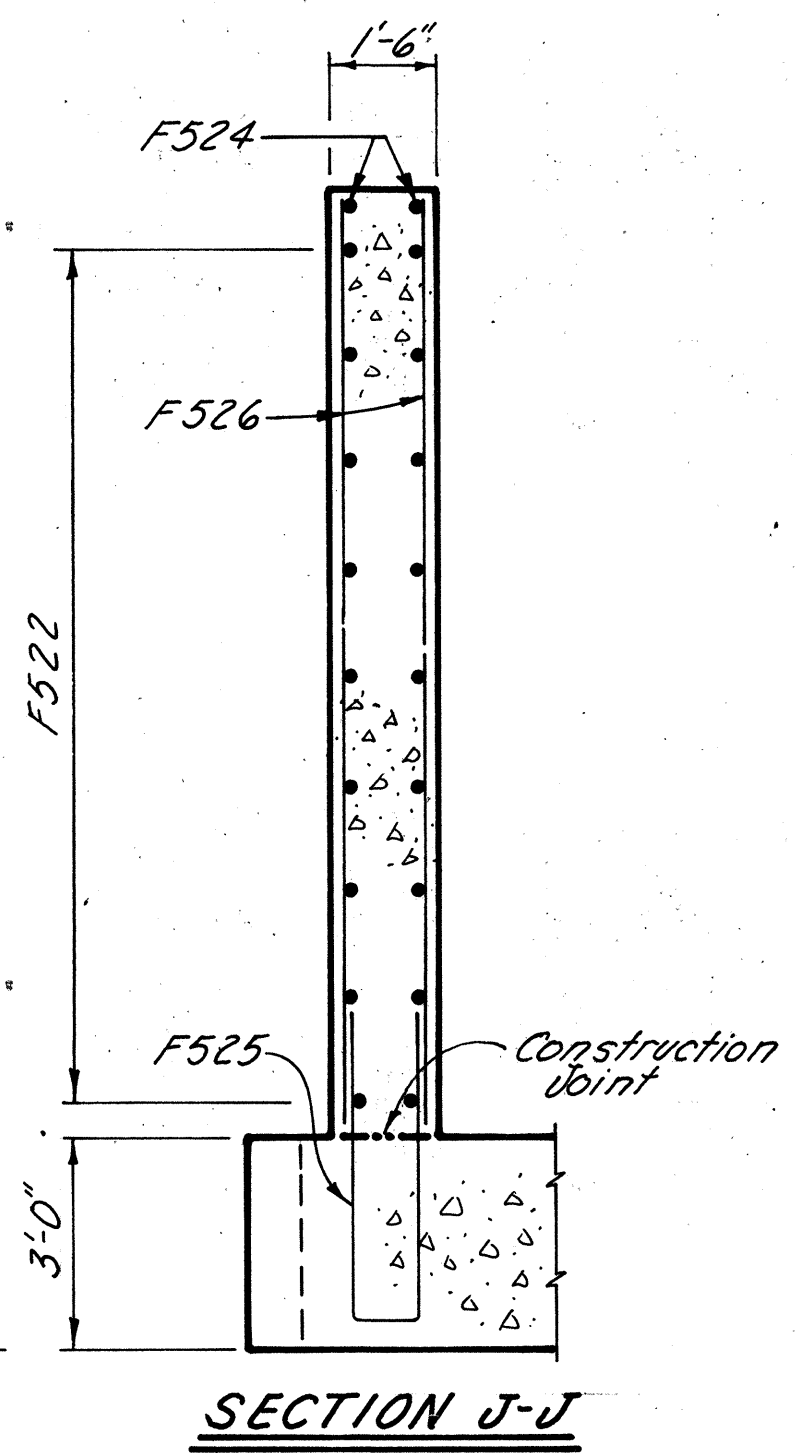
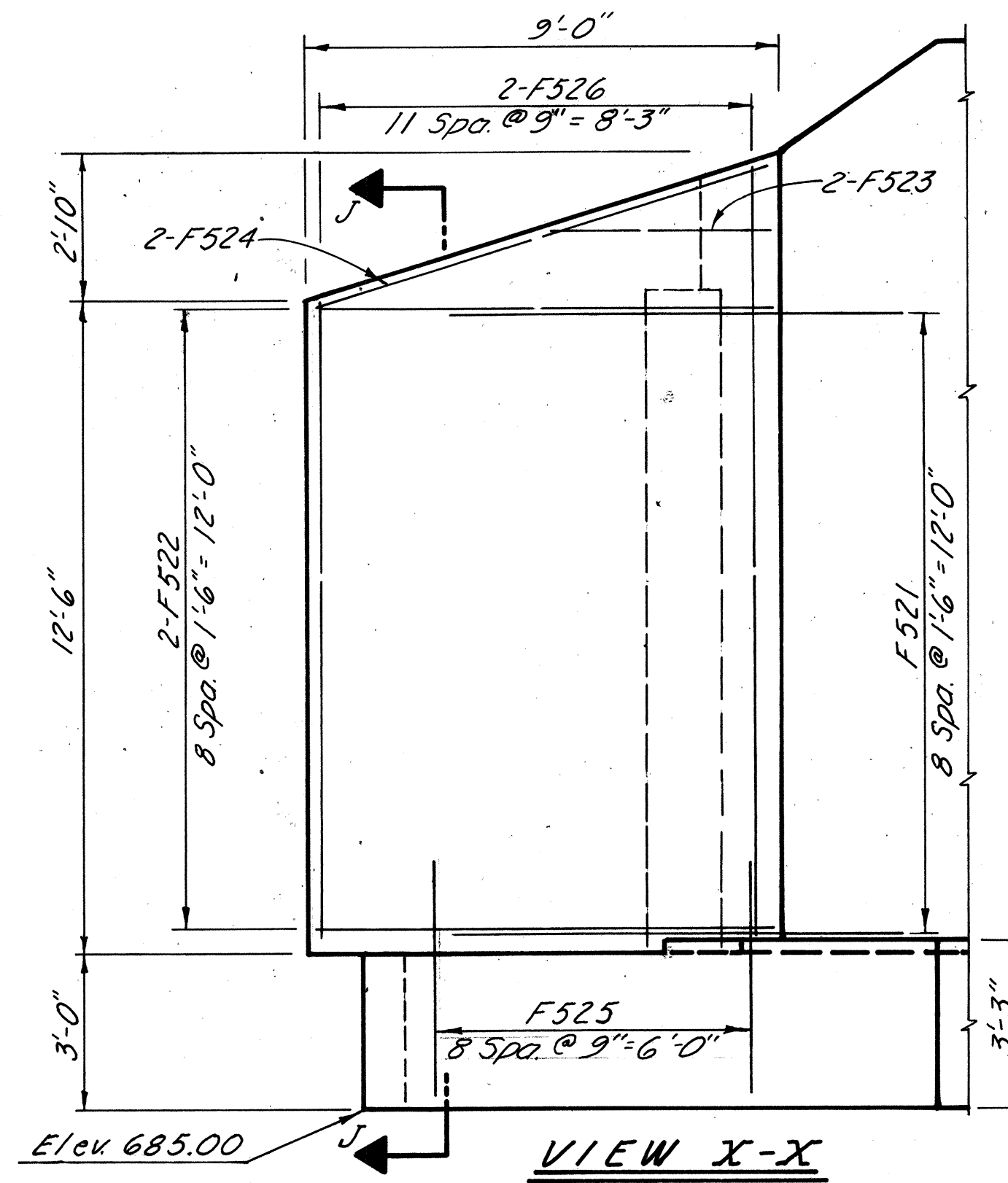
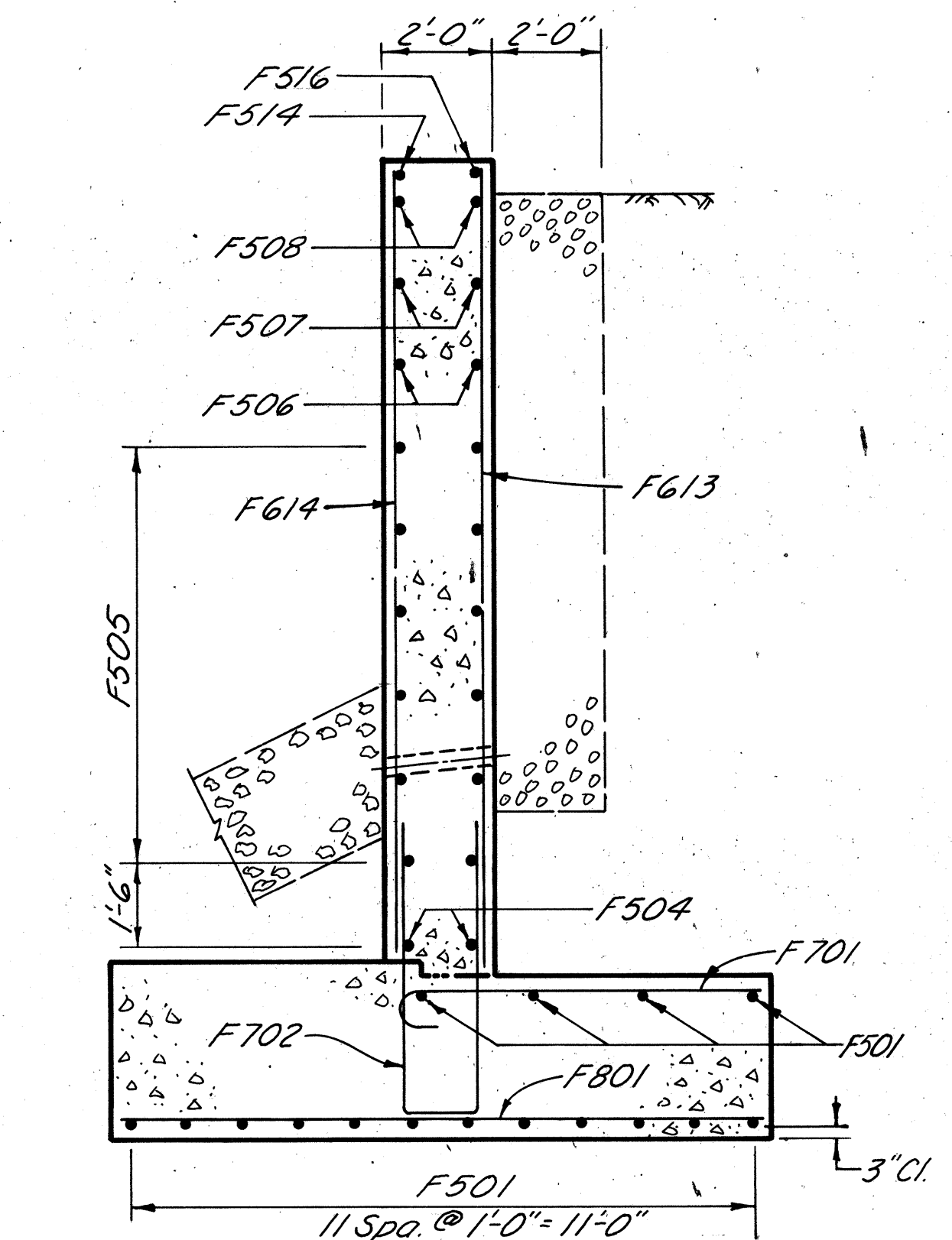
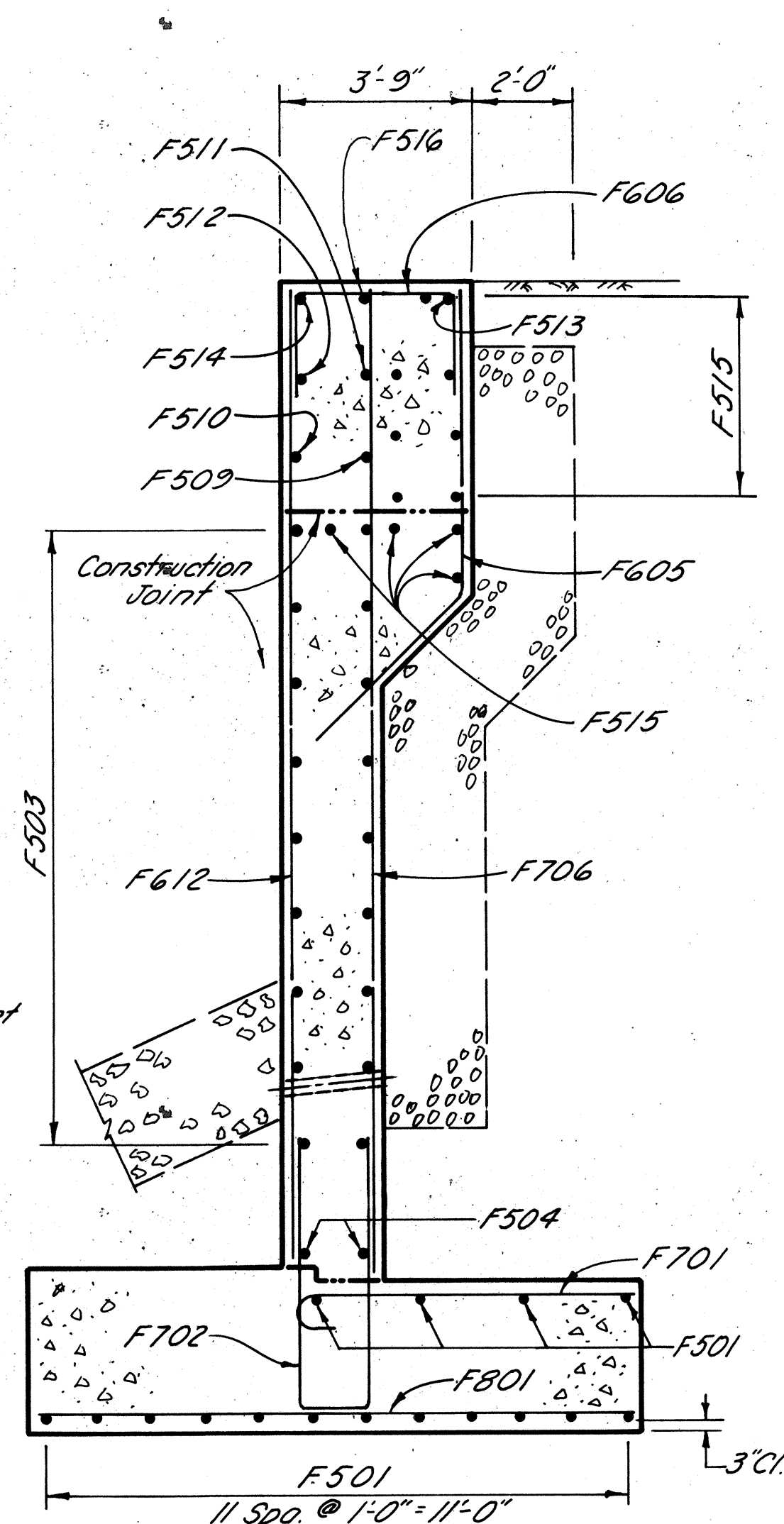
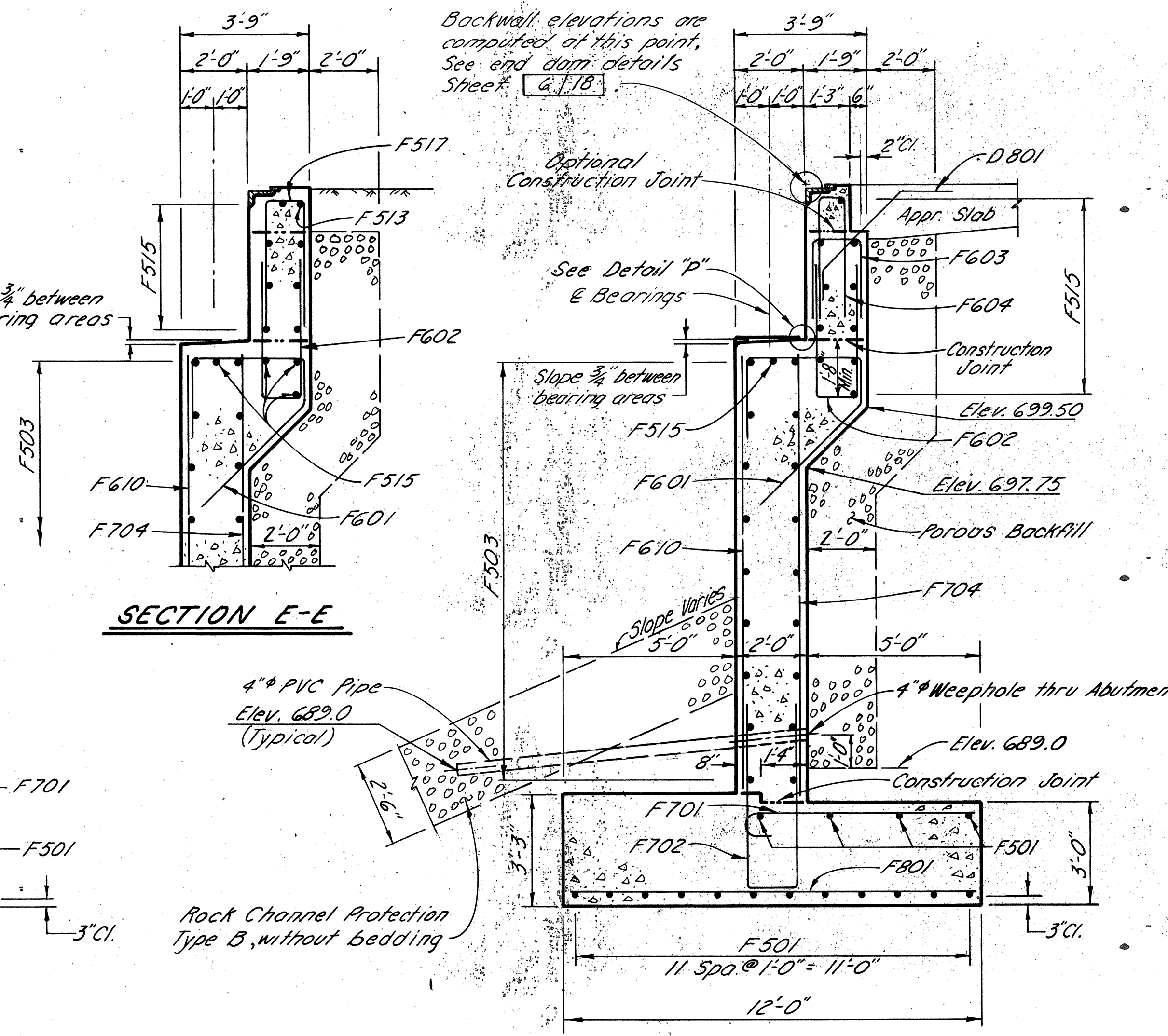
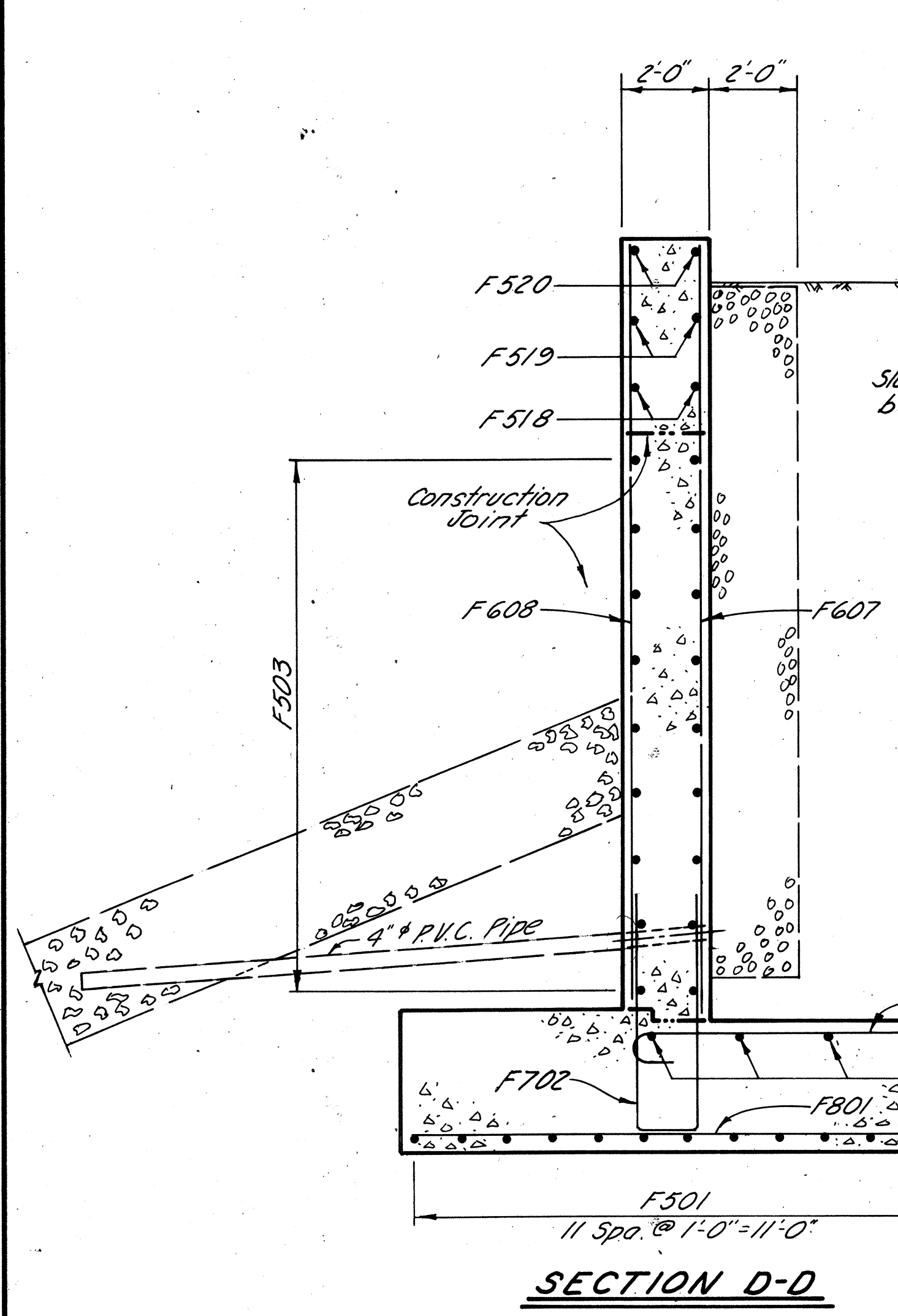
BAR No.	HORIZONTAL	VERTICAL
5	2'-5"	1'-8"
6	—	2'-0"
7	—	2'-7"

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ENGINEERS
WORTHINGTON OHIO

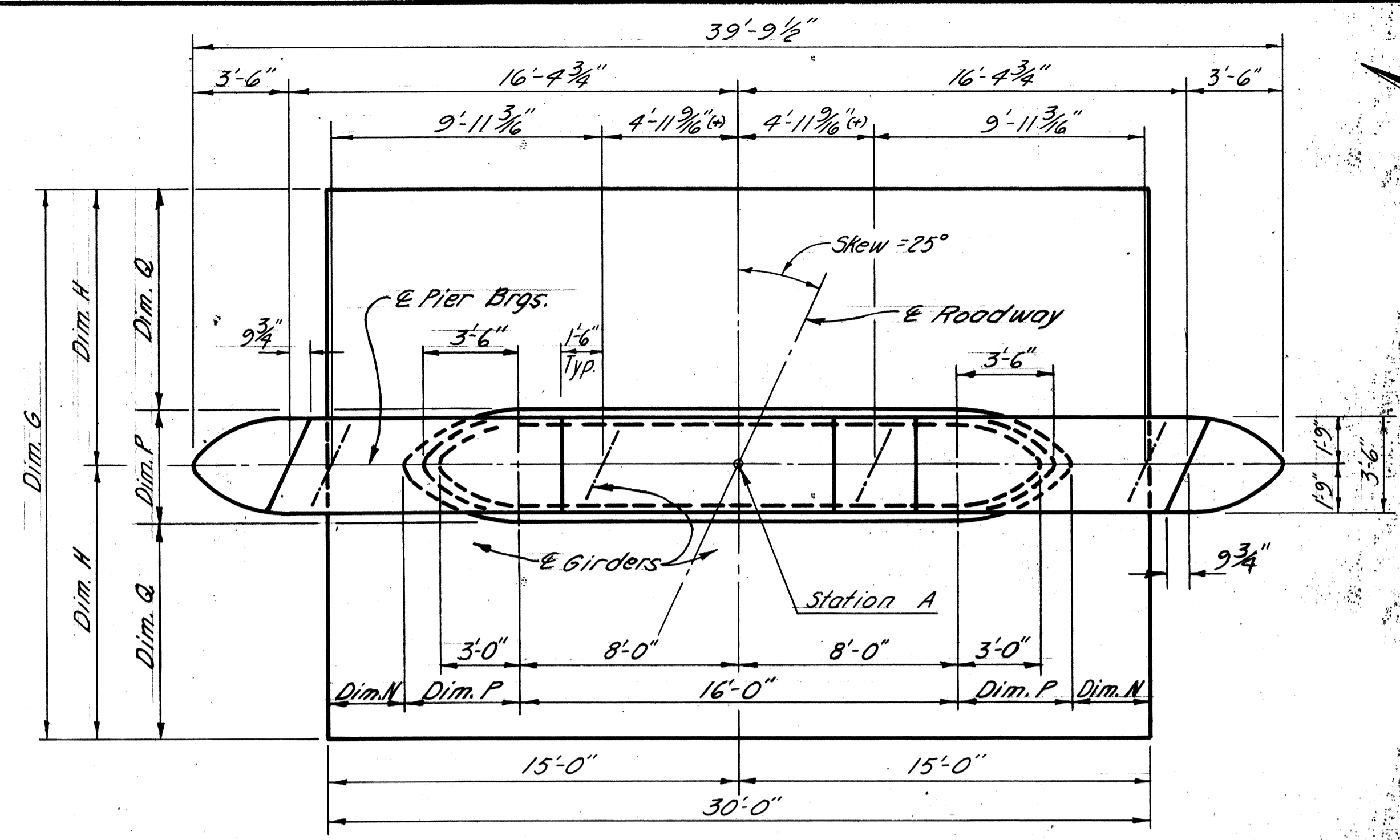
**FORWARD ABUTMENT
DETAILS**
BRIDGE NO. PAU-637-1569
OVER
AUGLAIZE RIVER
STA. 26+24.52
33+76.48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.G.	R.D.Y.		G.T.	T.R.O.	5-30-80	
				T.R.O.	D.I.C.	6-2-80



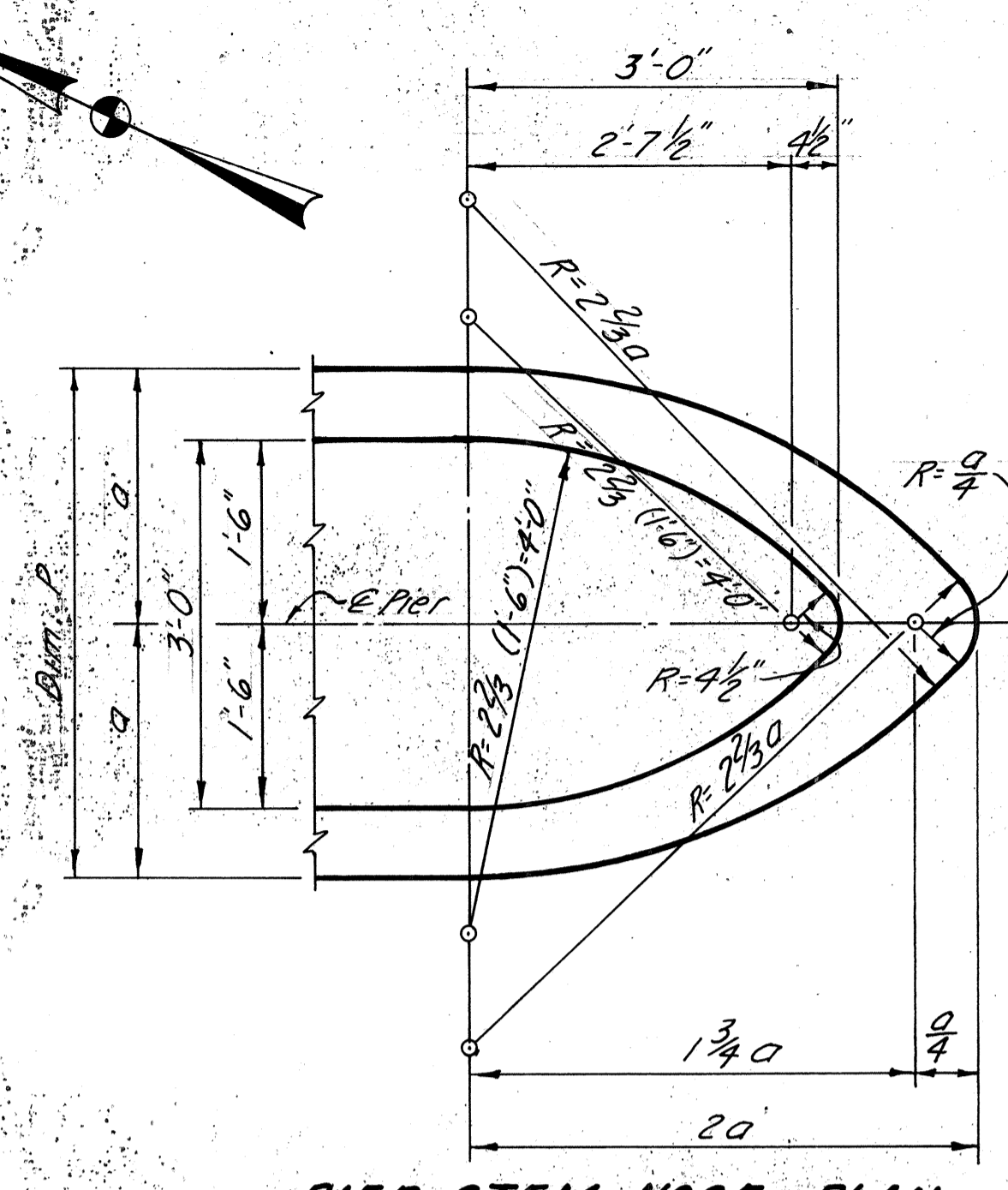
STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS WORTHINGTON OHIO					
FORWARD ABUTMENT DETAILS					
BRIDGE NO. PAU-637-1563 OVER AUGLAIZE RIVER					
STA. 26+24.52 33+76.48					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.G.	R.D.Y.		G.T.	T.R.O.	5-30-80
			T.R.O.	D.I.C.	6-2-80

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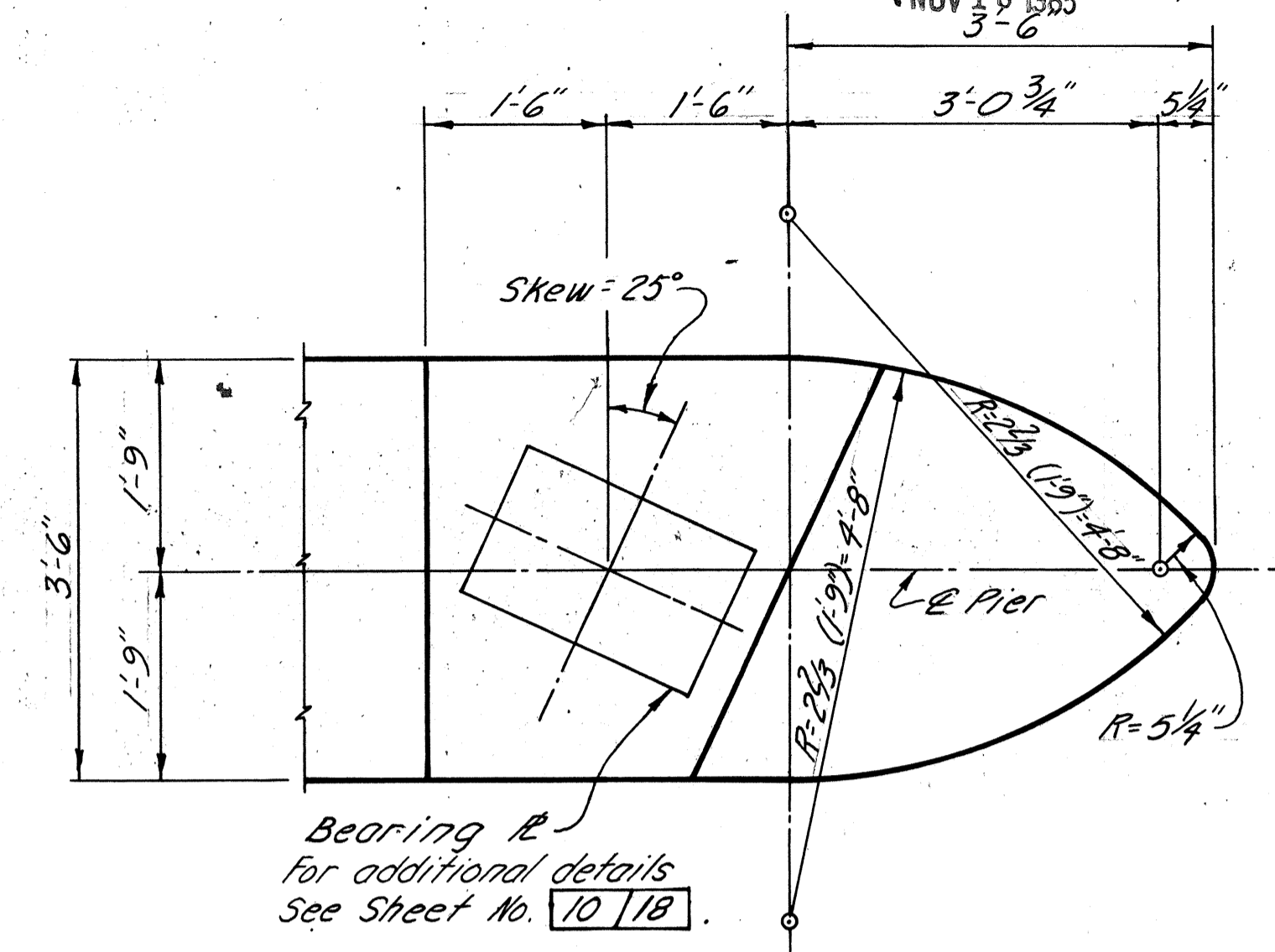


PLAN

Bearing Seats are shown for piers No. 1, 2 & 3.
Similar arrangement for piers No. 4, 5 & 6.

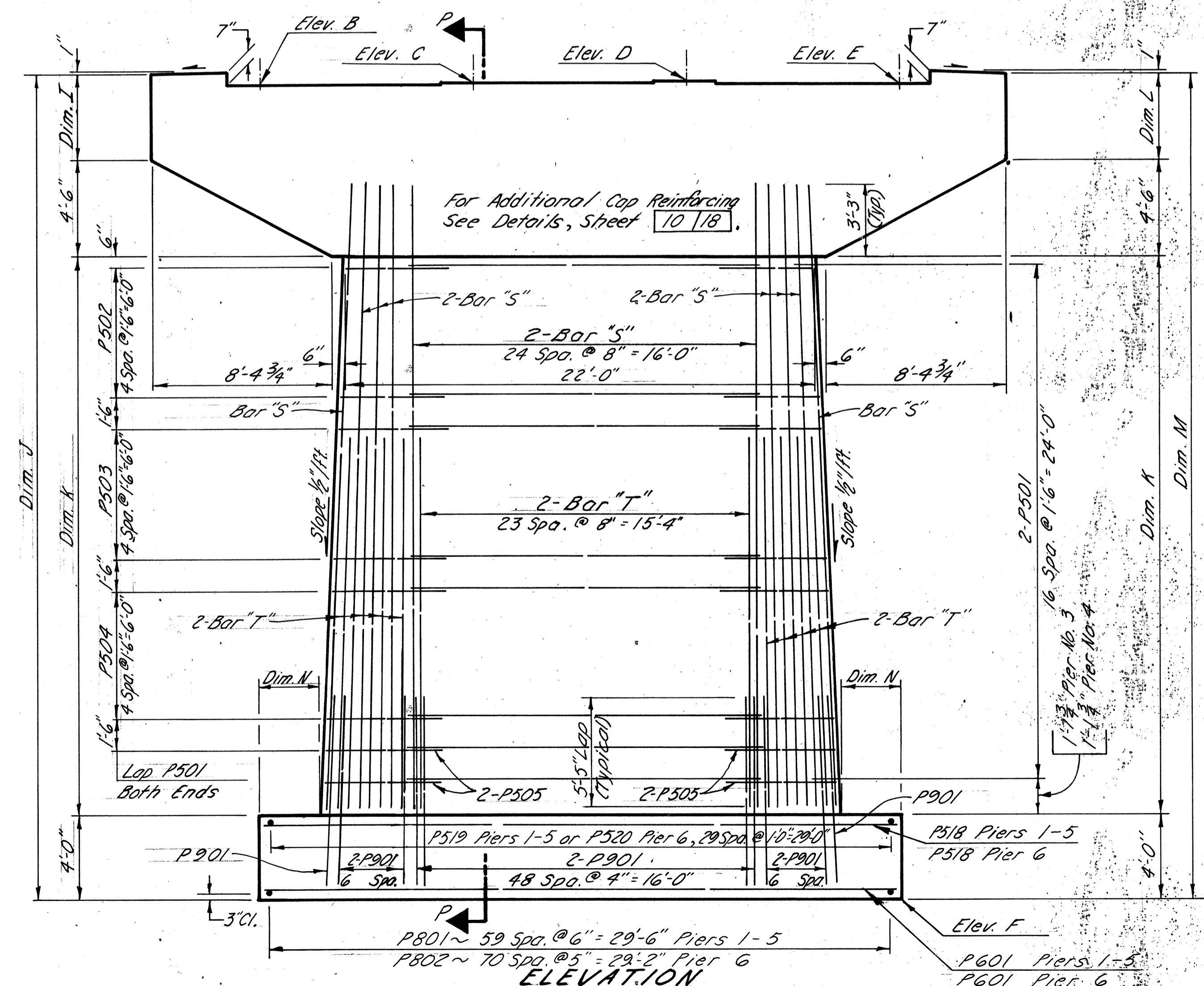


PIER STEM NOSE PLAN



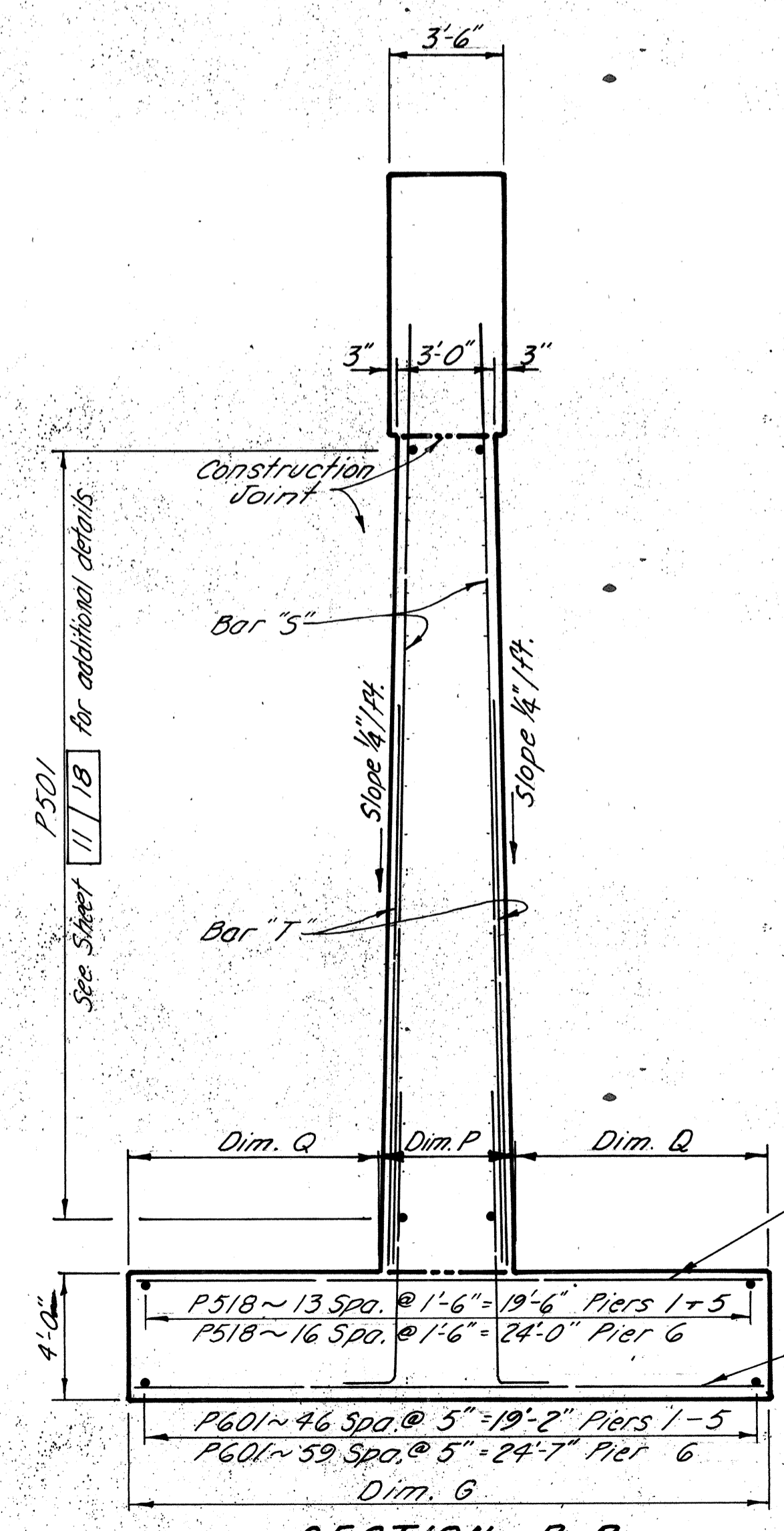
PIER CAP NOSE PLAN

Bearing is for additional details
See Sheet No. 10/18



ELEVATION

Horizontal stem reinforcement shown for piers No. 3 and 4
For horizontal stem reinforcement for piers No. 1, 2, 5 & 6 see sheet No. 11/18



SECTION P-P

PIER NO.	1	2	3	4	5	6
Station A	26+90.00	27+86.00	29+29.00	30+72.00	32+15.00	33+11.00
Elevation B	703.36	704.05	705.15	704.75	703.45	703.12
" C	703.62	704.27	705.30	704.86	703.52	703.16
" D	703.74	704.34	705.31	704.83	703.45	703.06
" E	703.71	704.28	705.18	704.65	703.23	702.82
" F	675.00	671.00	667.00	667.00	667.00	667.00
Dimension G	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	25'-0"
" H	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	12'-6"
" I	4'-0"	4'-0"	4'-0"	4'-1 1/4"	4'-2 5/8"	4'-3 3/8"
" J	28'-10 3/8"	33'-6 5/8"	38'-7 3/4"	38'-3"	36'-11 3/8"	36'-7 1/2"
" K	16'-4 3/8"	21'-0 5/8"	26'-1 3/4"	25'-7 3/4"	24'-2 3/4"	23'-9 1/8"
" L	4'-4 1/4"	4'-2 3/4"	4'-0 3/8"	4'-0"	4'-0"	4'-0"
" M	29'-2 1/2"	33'-9 3/8"	38'-8 1/8"	38'-1 3/4"	36'-8 3/4"	36'-3 7/8"
" N	3'-3 1/8"	3'-1 1/2"	2'-11"	2'-11 1/4"	3'-0"	3'-0"
" P	3'-8 1/8"	3'-10 1/2"	4'-1"	4'-0 3/4"	4'-0"	4'-0"
" Q	8'-2"	8'-0 3/4"	7'-11 1/2"	7'-11 5/8"	8'-0"	10'-6"
Bar S	P903	P905	P907	P909	P911	P913
Bar T	P902	P904	P906	P908	P910	P912

STICKLEN - BELSHEIM & ASSOCIATES
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WORTHINGTON OHIO

PIER DETAILS
BRIDGE NO. PAU-037-15.03
OVER
AUGLAIZE RIVER
STA. 26+24.52
33+76.48

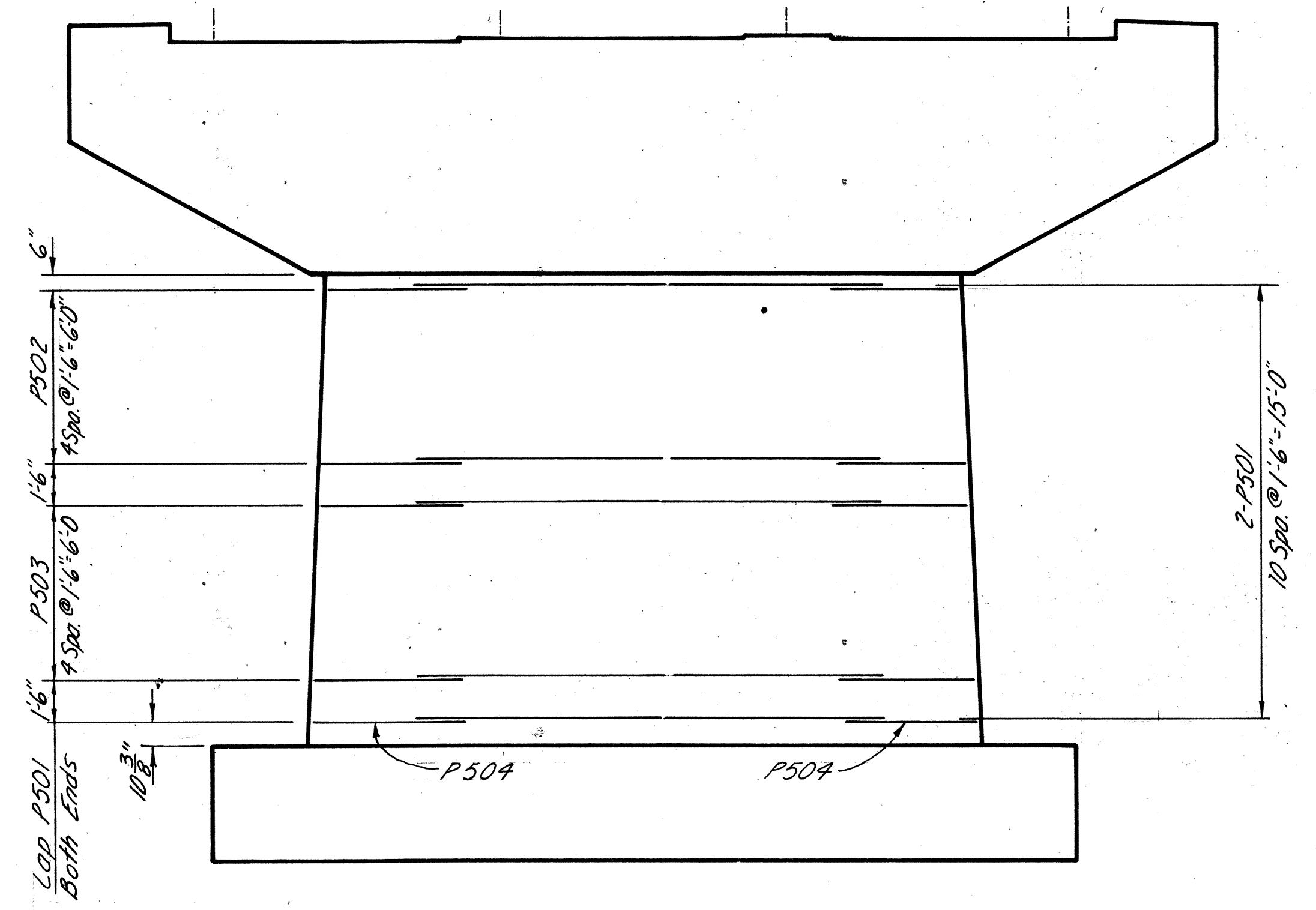
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R.G.	R.D.Y.		G.T.	T.R.O.	5-30-80	
			T.R.Q.	D.I.C.	6-2-80	

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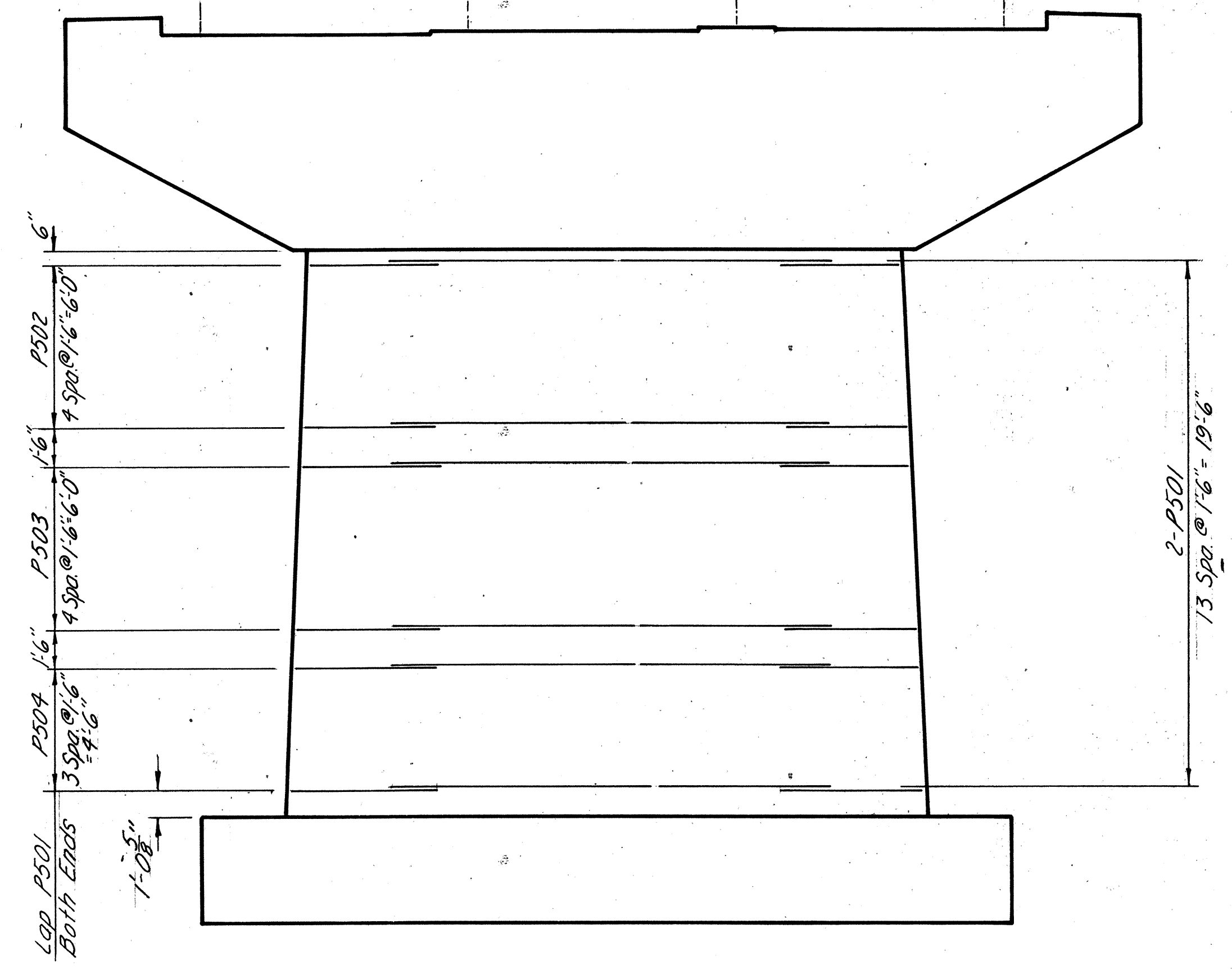
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

37
51

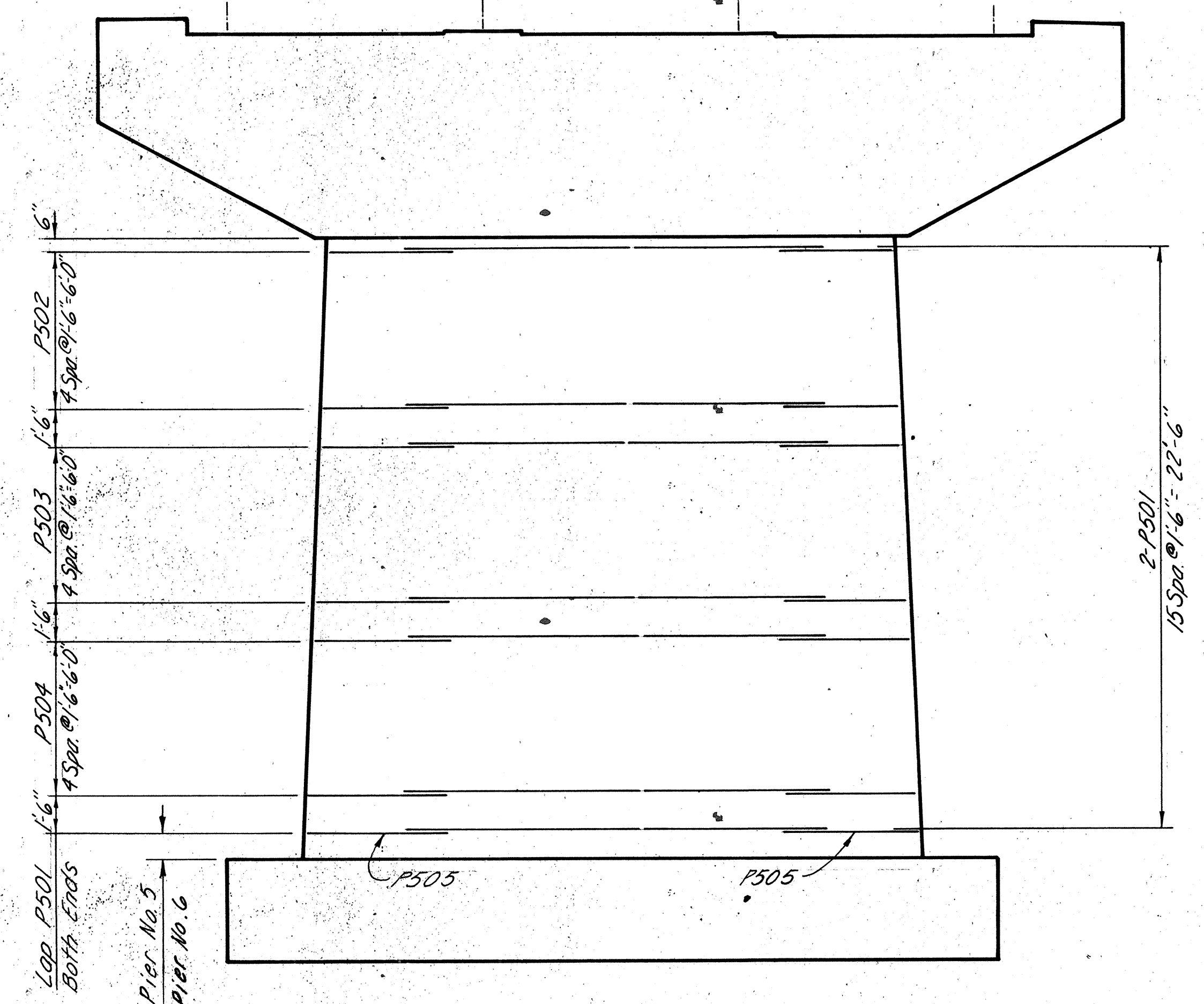
PAULDING COUNTY
PAU-637-15.63



ELEVATION
Pier No. 1



ELEVATION
Pier No. 2



ELEVATION
Piers No. 5 & 6

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS WORTHINGTON OHIO					
PIER DETAILS					
BRIDGE NO. PAU-637-1569 OVER AUGLAIZE RIVER					
PAULDING CO.				STA. 26+24.52 33+76.48	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.G.	R.D.Y.		G.T.	T.R.O.	5-30-80
				D.I.C.	6-2-80

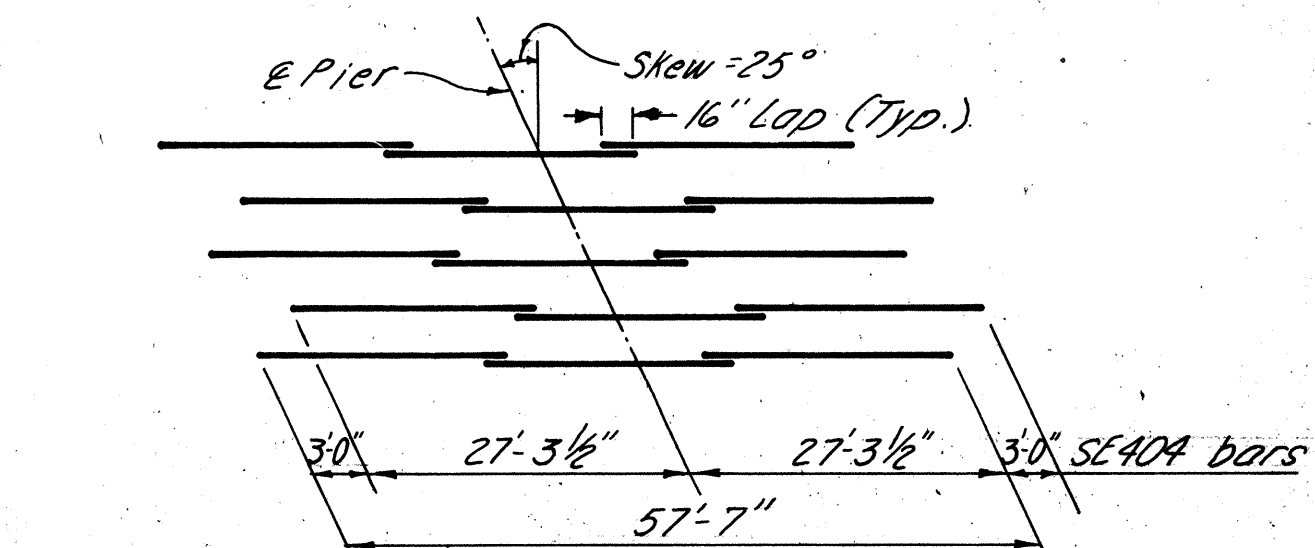
MICROFILMED
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5	OHIO		

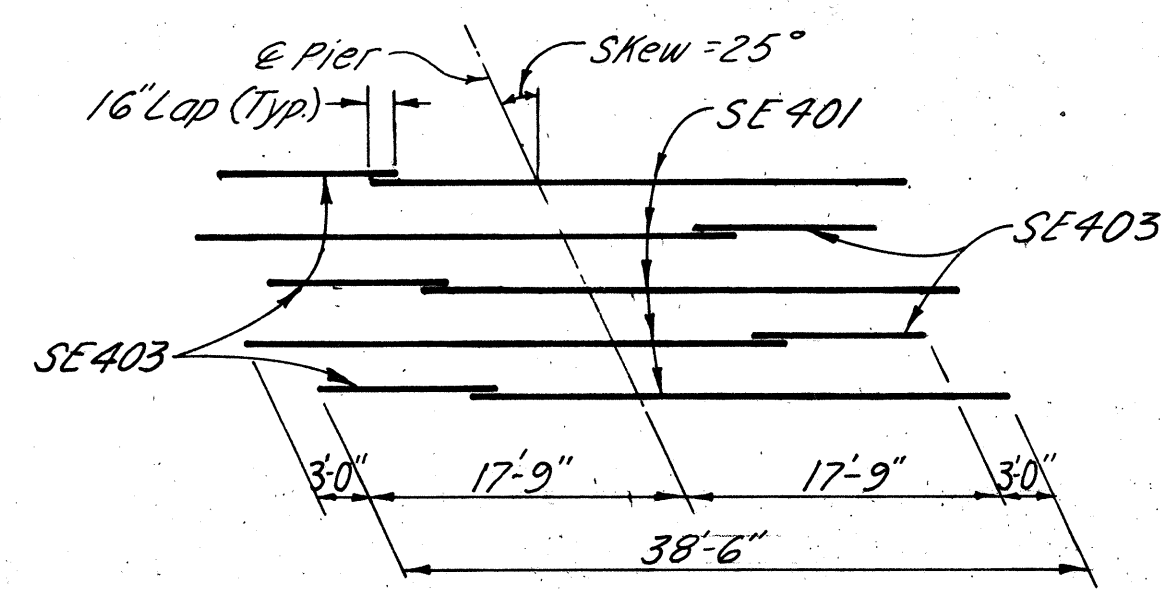
38
51

PAULDING COUNTY
PAU-637-1563

SOUTH EDGE		NORTH EDGE	
Station	Elevation	Station	Elevation
26+34.31	706.15	26+19.69	705.64
+50.06	706.71	+35.44	706.23
+65.81	707.22	+51.19	706.76
+84.56	707.67	+66.94	707.23
+97.31	708.10	+82.69	707.69
27+12.81	708.52	+98.19	708.13
+21.31	708.75	27+06.69	708.37
+45.31	709.32	+30.69	708.98
+60.81	709.63	+46.19	709.32
+69.31	709.79	+54.69	709.49
+93.31	710.23	+78.69	709.97
28+16.31	710.65	28+01.69	710.43
+29.06	710.86	+44.44	710.66
+50.50	711.17	+35.89	711.00
+64.81	711.31	+50.19	711.17
+79.11	711.42	+64.50	711.30
29+00.56	711.51	+85.94	711.42
+05.31	711.52	+90.69	711.44
+22.00	711.54	29+07.39	711.49
+36.31	711.56	+21.69	711.52
+50.61	711.57	+36.00	711.56
+71.31	711.59	+56.69	711.60
+93.50	711.58	+78.89	711.61
30+07.81	711.54	+93.19	711.58
+22.11	711.47	30+07.50	711.53
+44.31	711.31	+29.69	711.40
+65.00	711.14	+50.39	711.24
+79.31	711.02	+64.69	711.14
+93.61	710.92	+79.00	711.05
31+10.31	710.79	+95.69	710.94
+15.06	710.76	31+00.44	710.91
+36.50	710.56	+21.89	710.73
+50.81	710.40	+36.19	710.58
+65.11	710.20	+50.50	710.40
+86.56	709.84	+71.94	710.06
+99.31	709.60	+84.69	709.83
32+22.31	709.16	32+07.69	709.41
+46.31	708.71	+31.69	708.98
+54.81	708.55	+40.19	708.84
+70.31	708.26	+55.69	708.55
+94.31	707.73	+79.69	708.05
33+02.81	707.53	+88.19	707.86
+18.31	707.16	33+03.69	707.50
+34.06	706.79	+19.44	707.15
+49.81	706.41	+35.19	706.78
+65.56	705.99	+50.94	706.37
33+81.31	705.55	33+66.69	705.93



STAGGER DIAGRAM
SHOWING BARS OVER PIERS 2 THRU 5



STAGGER DIAGRAM
SHOWING BARS OVER PIERS 1 & 6

NOTES:
* This is the design dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per 511.18.

HAUNCH: A haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" (provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.)

SE --- Bars are Epoxy Coated Reinforcing

FOR DETAILS OF	SEE STD. DWG.
End Dam	SD-T-69
End Crossframes	Sheet No. 1
Welded built joint in superstructure end dam	
Deep beam bridge guard rail with tubular backup	DBR-2-73

12/18

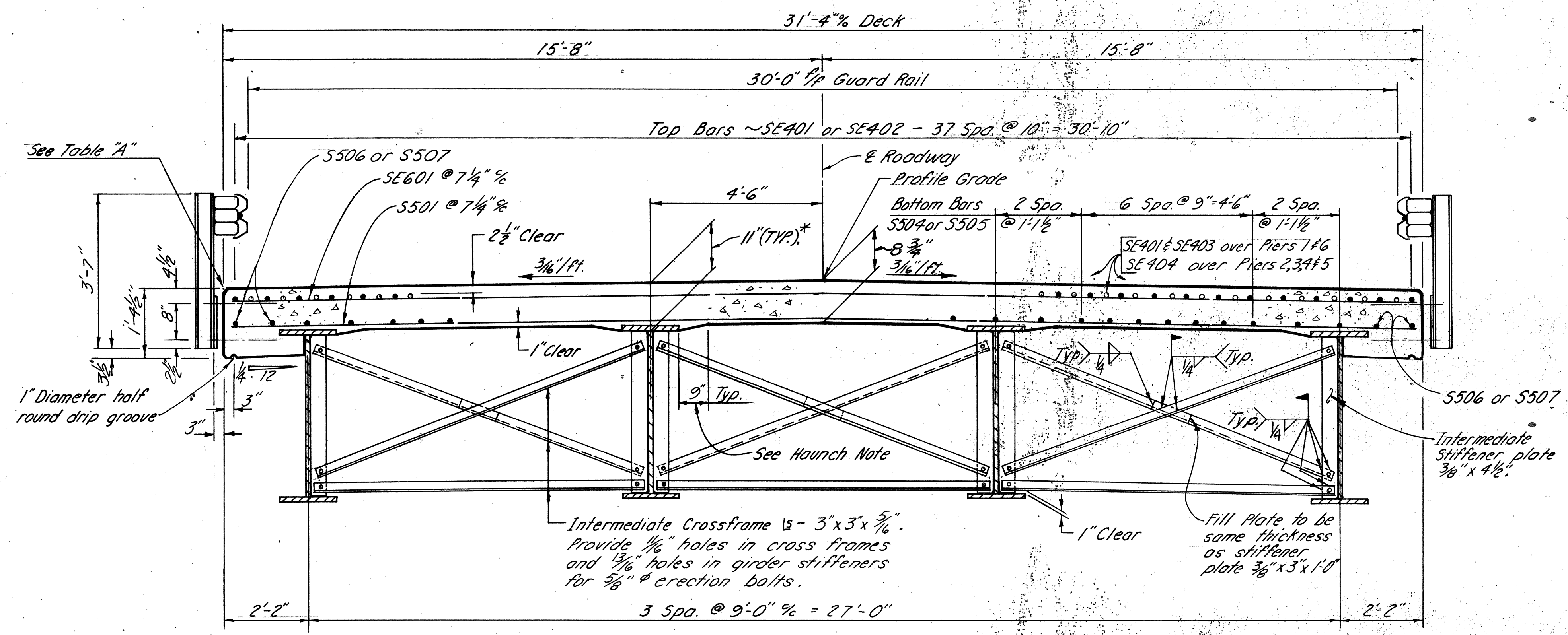
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ENGINEERS
WORTHINGTON OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. PAU-637-1563
OVER
AUGLAIZE RIVER

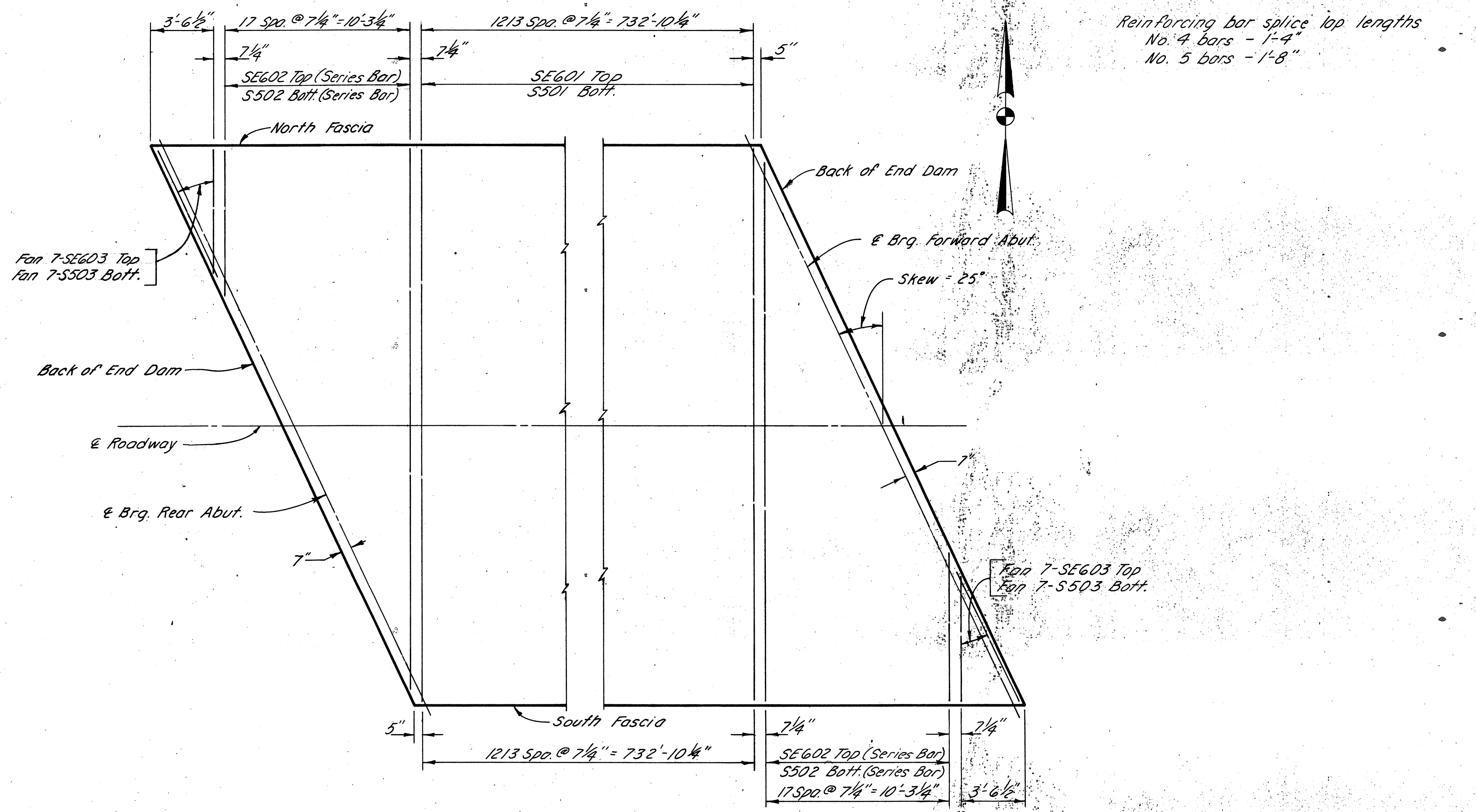
STA. 26+24.52
33+76.48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
G.T.	R.D.Y.		T.R.O.	T.R.O.	5-30-80
			R.G.	D.I.C.	6-2-80

The elevations shown at edge of deck are those which are required before the concrete deck is placed. Proper allowance has been made for the dead load deflections caused by the weight of the concrete.



TRANSVERSE SECTION



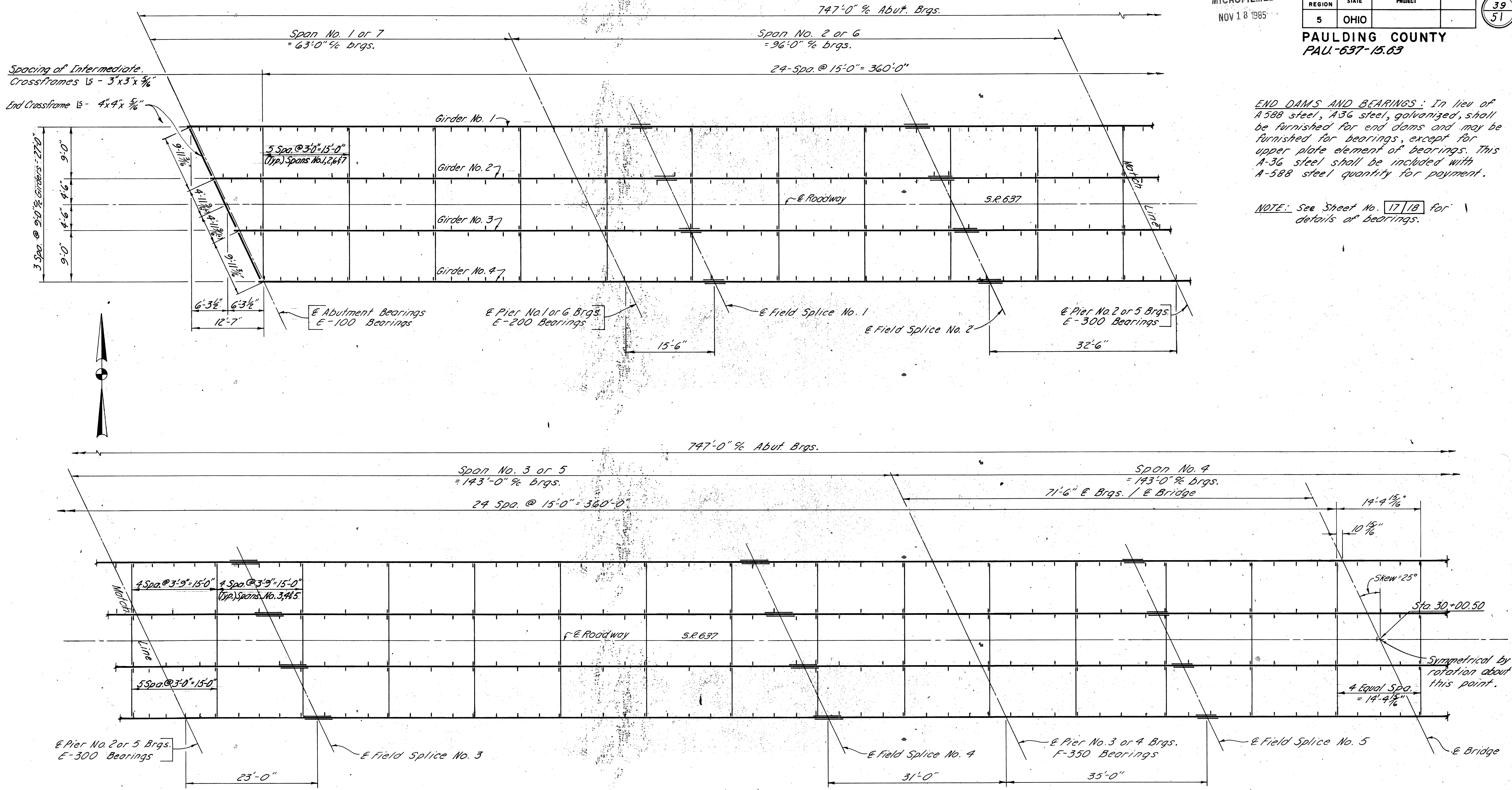
DECK REINFORCING STEEL LAYOUT

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5	OHIO	

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PAULDING COUNTY
PAU-637-15.03



END DAMS AND BEARINGS: In lieu of A-588 steel, A-36 steel, galvanized, shall be furnished for end dams and may be furnished for bearings, except for upper plate element of bearings. This A-36 steel shall be included with A-588 steel quantity for payment.

NOTE: See Sheet No. 17/18 for details of bearings.

HALF STEEL FRAMING PLAN

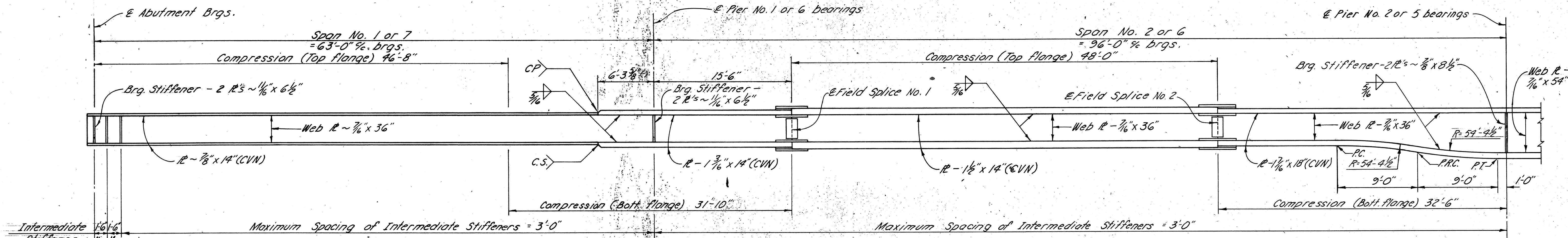
STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS WORTHINGTON OHIO					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. PAU-637-15.03 OVER AUGLAIZE RIVER					
PAULDING CO. STA. 26+24.52 33+76.48					
DESIGNED G.T. R.G.	DRAWN R.D.Y.	TRACED	CHECKED T.R.O.	REVIEWED T.R.O. 5-30-80 D.I.C. 6-2-80	DATE REVIS

MICROFILMED
NOV 18 1985

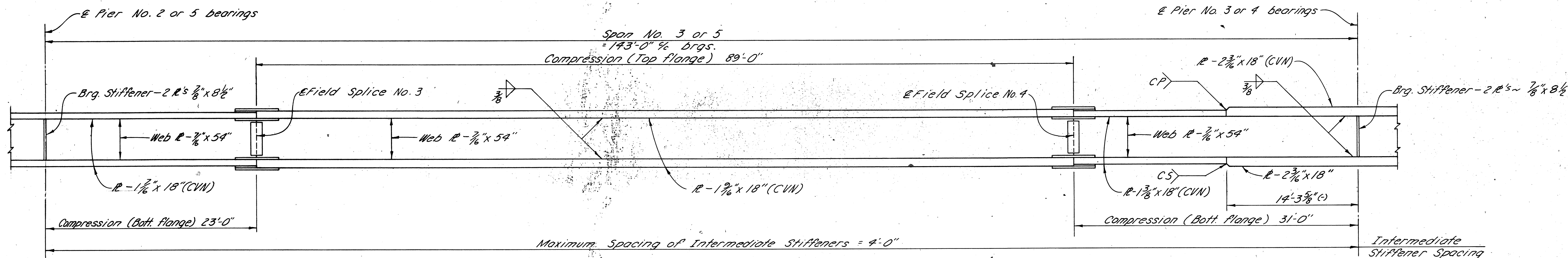
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

PAULDING COUNTY
PAU-637-15.63

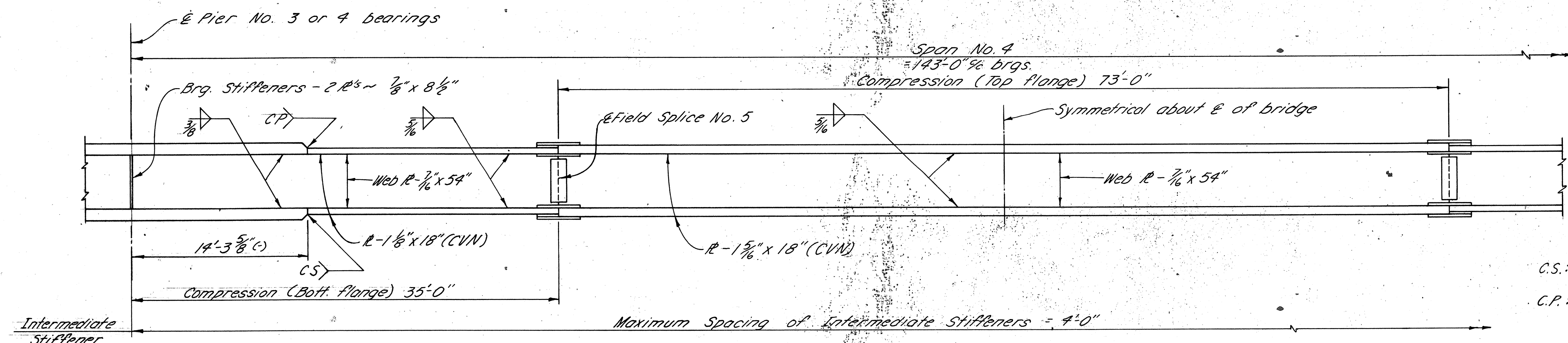
40
51



GIRDER ELEVATION - SPANS 1, 2, 6 & 7



GIRDER ELEVATION - SPANS 3 & 5



GIRDER ELEVATION - SPAN 4

WELDED ATTACHMENTS to the top flange of the fascia girders for construction purposes will be permitted provided that they consist of fillet welds less than 2" long and not closer than 1" to the edge of flange.

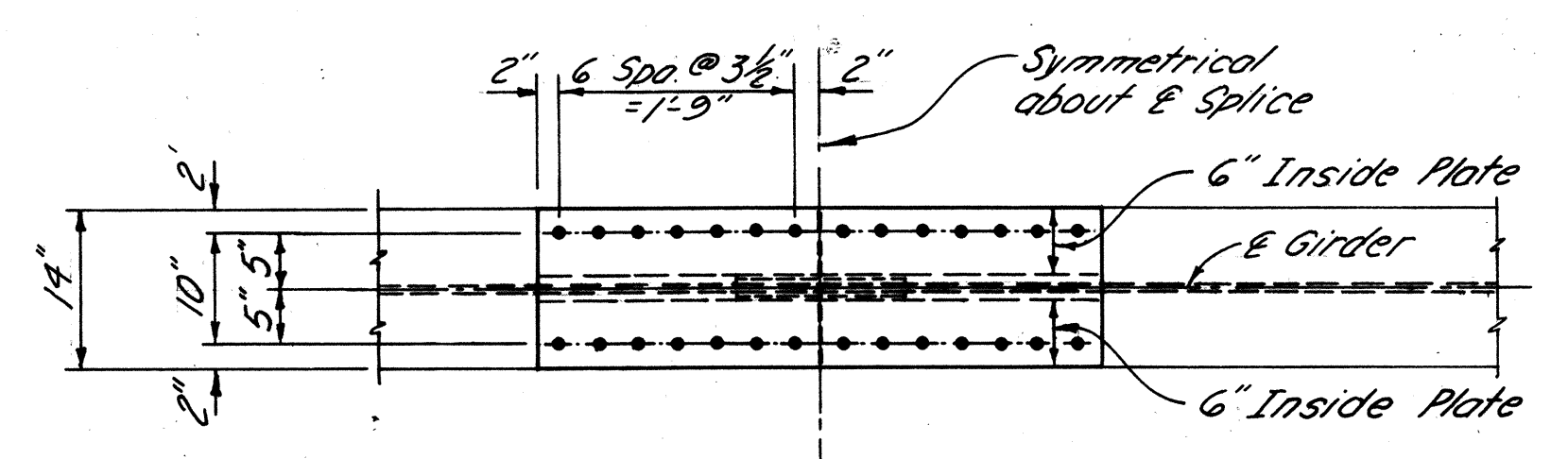
Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements.

In addition, all web plates and all splice plates (not including fill plates) shall meet the specified minimum notch toughness requirements.

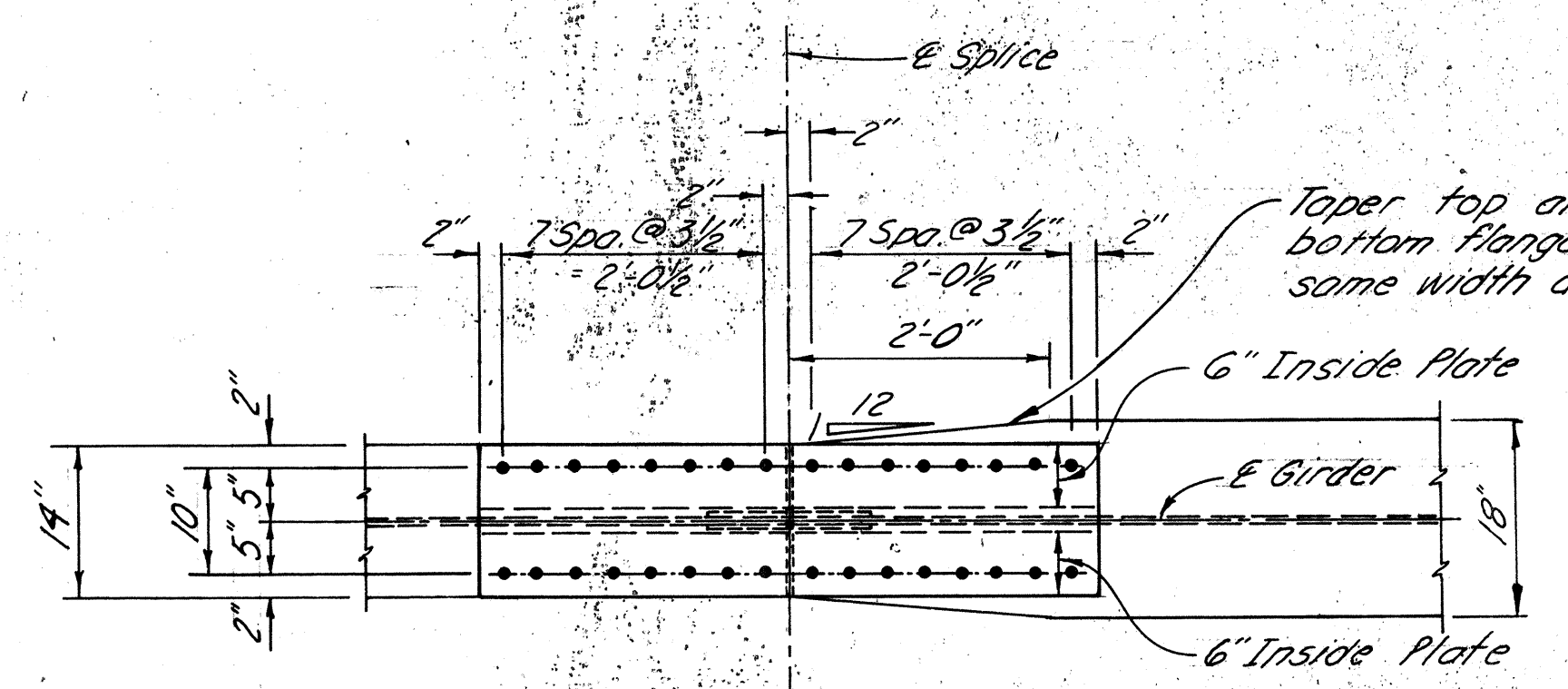
C.S.: Indicates butt weld subject to compressive stress only.
C.P.: Indicates complete penetration.

STICKLEN - BELSHEIM & ASSOCIATES ENGINEERS WORTHINGTON OHIO					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. PAU-637-1569 OVER AUGLAIZE RIVER					
PAULDING CO.				STA. 26 + 24.52	14/18
DESIGNED G.T.	DRAWN R.D.Y.	TRACED	CHECKED R.G.	REVIEWED T.R.O.	DATE 5-30-80
					REVISED D.I.C. 6-2-80

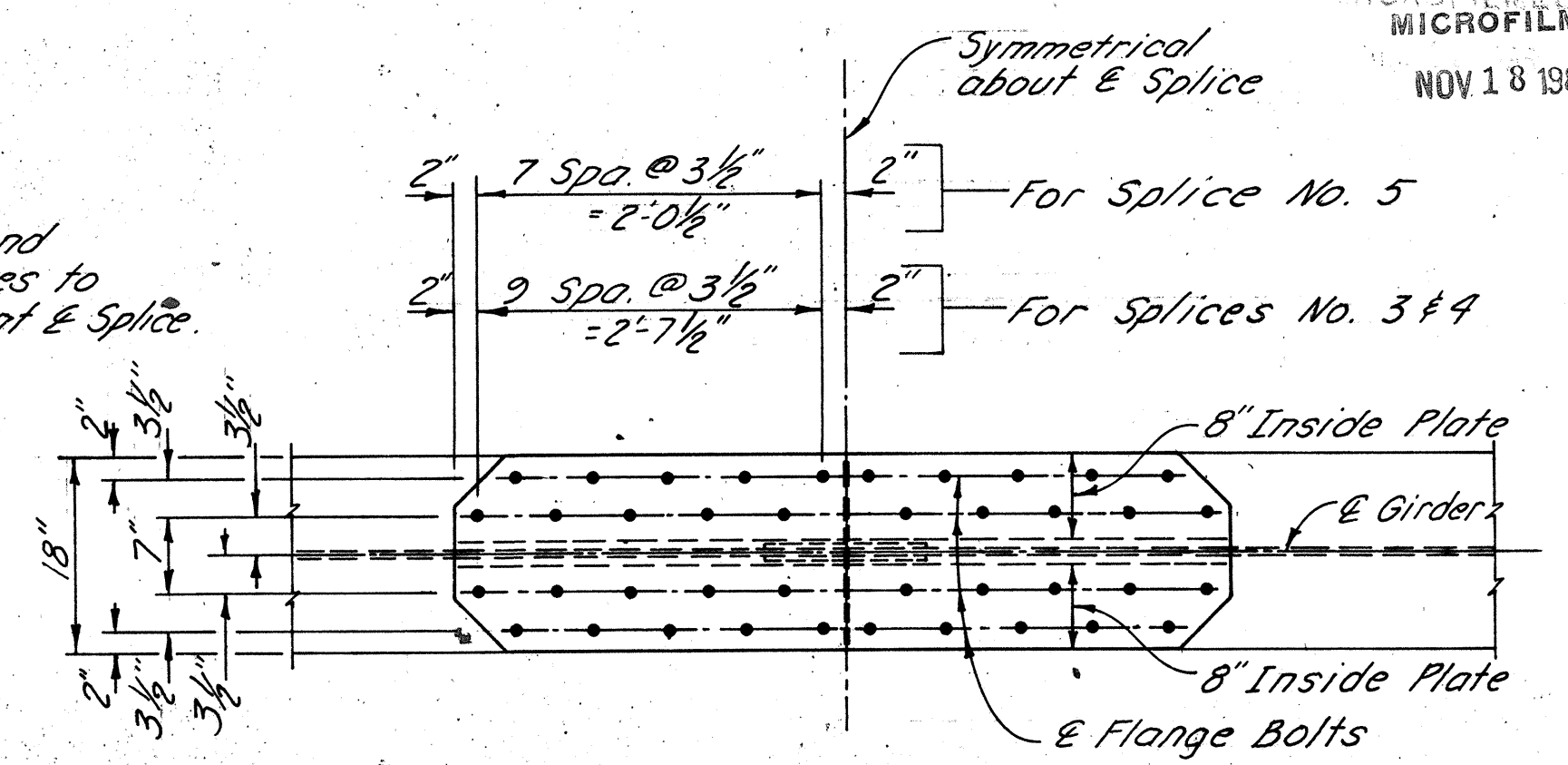
PAULDING COUNTY
PAU-637-15.63



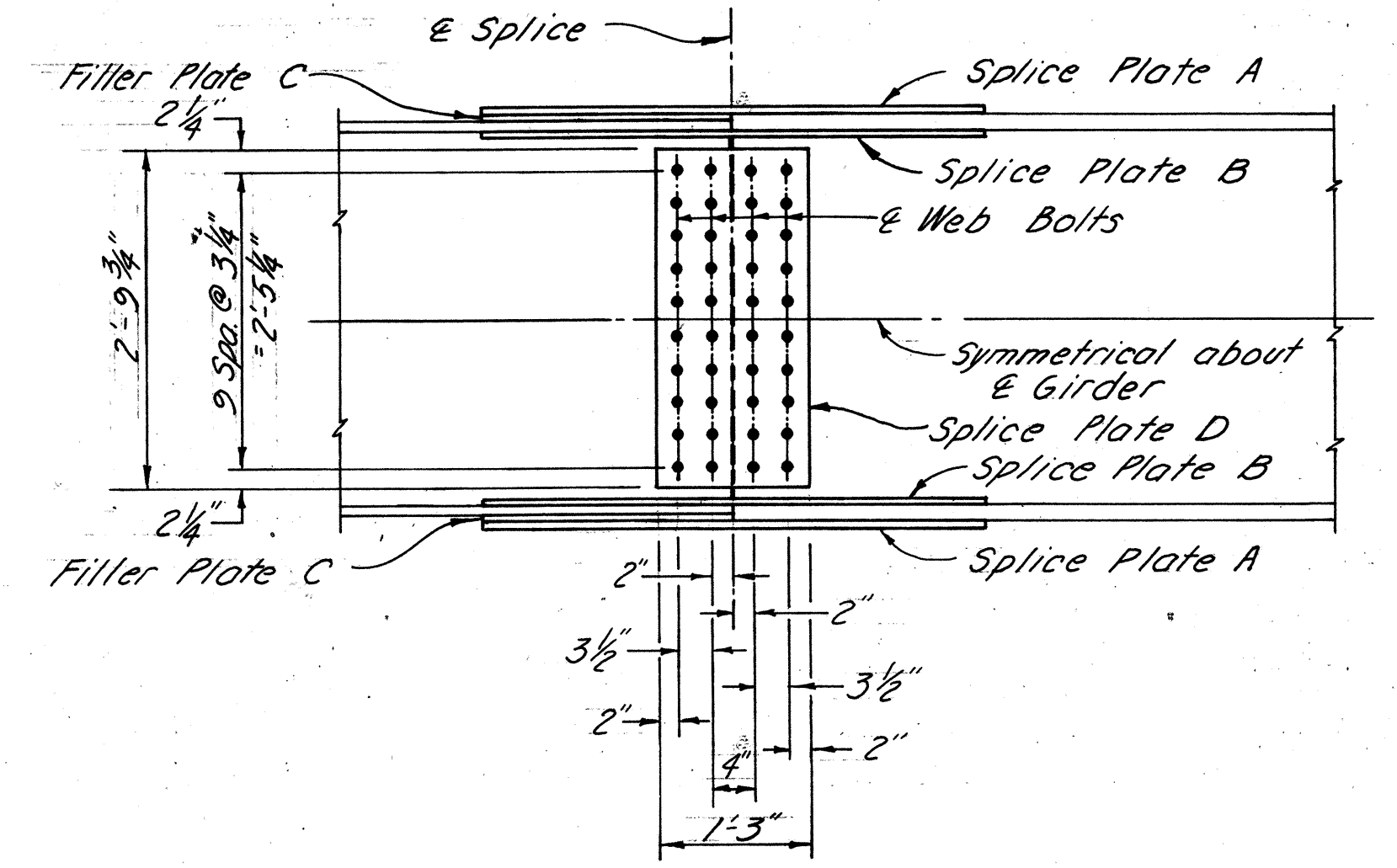
PLAN
FOR SPLICE NO. 1



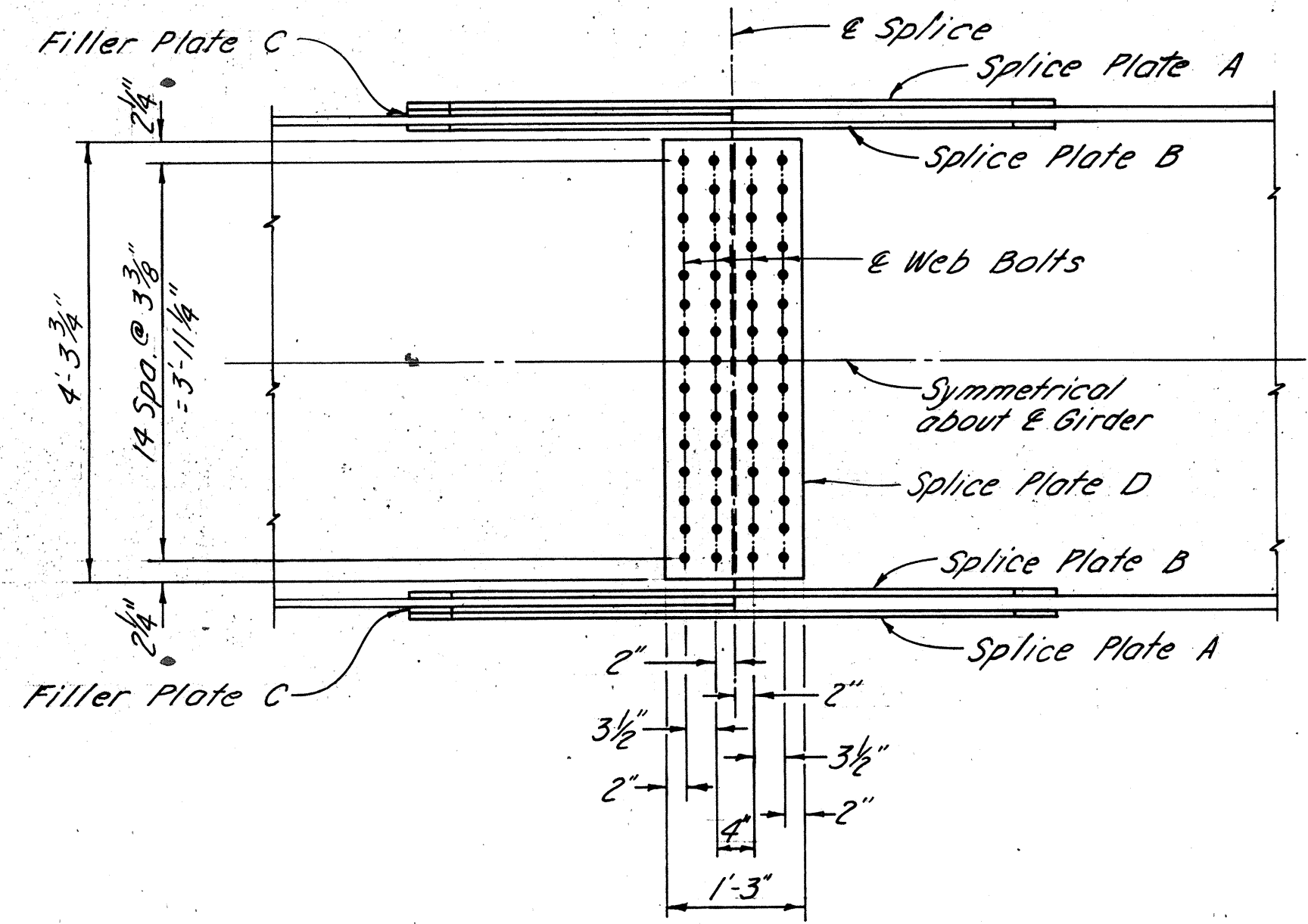
PLAN
FOR SPLICE NO. 2



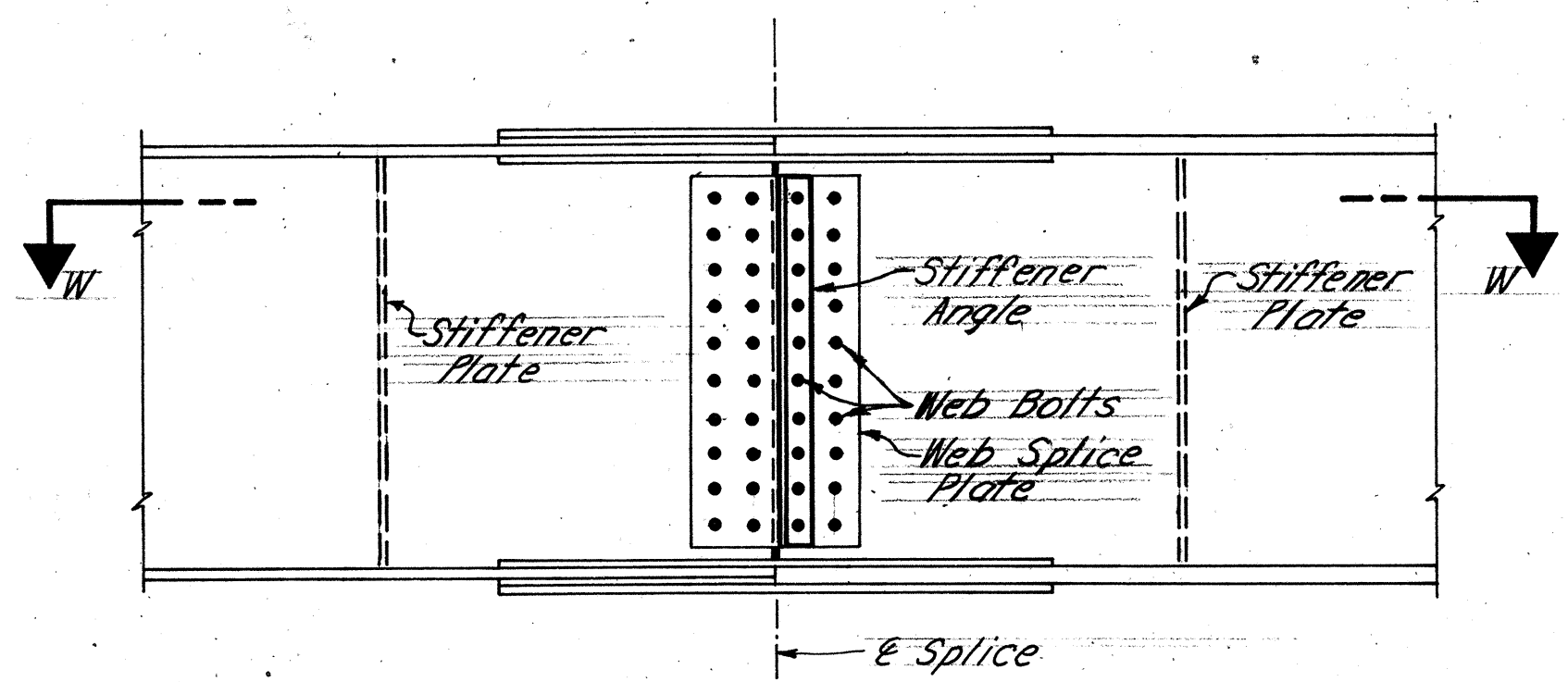
PLAN
FOR SPLICES NO. 3, 4 & 5



ELEVATION
FOR SPLICES NO. 1 & 2

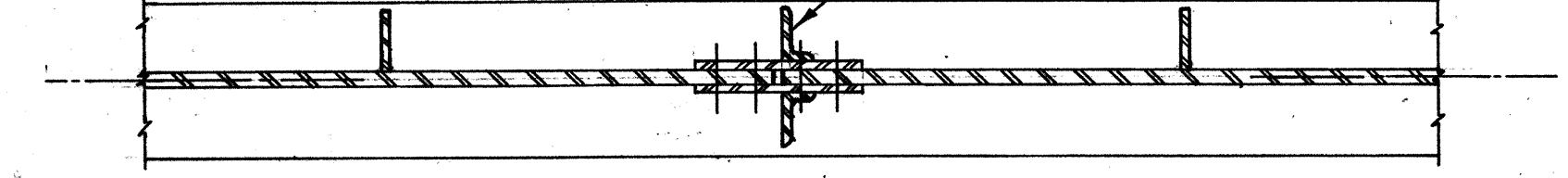


ELEVATION
FOR SPLICES NO. 3, 4 & 5



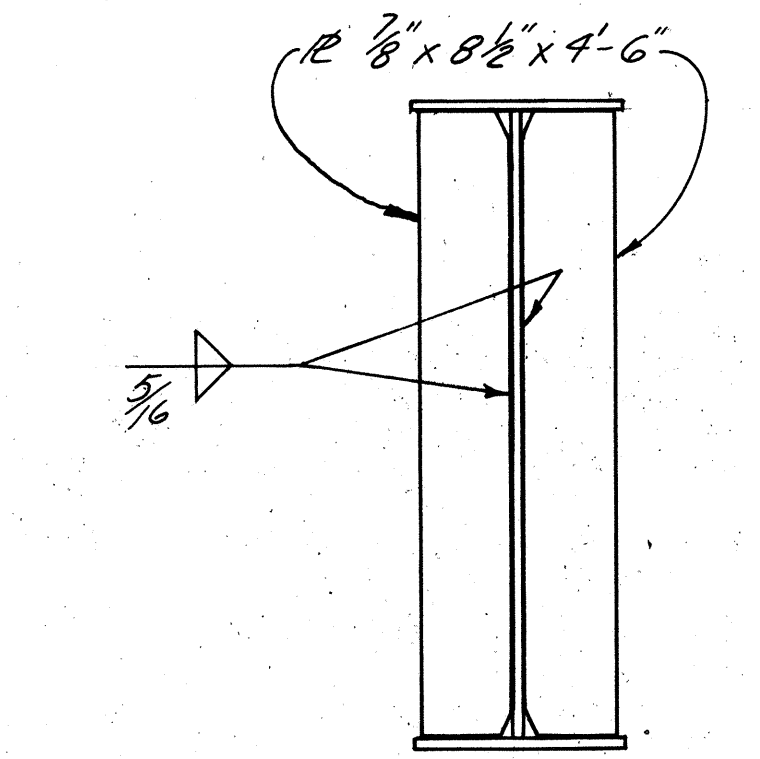
ELEVATION
W-W

Reverse outstanding leg or move stiffener a distance equal to bolt spacing to adjust to intermediate stiffener or crossframe spacing.

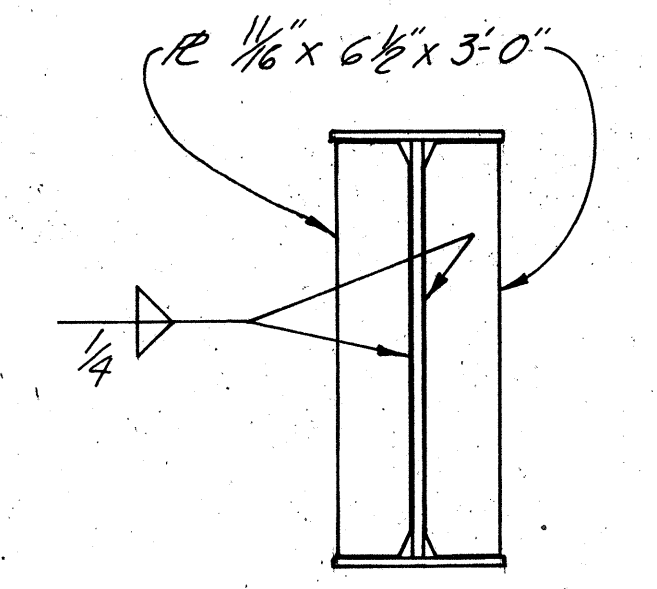


SECTION W-W

TREATMENT OF GIRDER STIFFENERS WHEN LOCATED AT BOLTED SPLICE

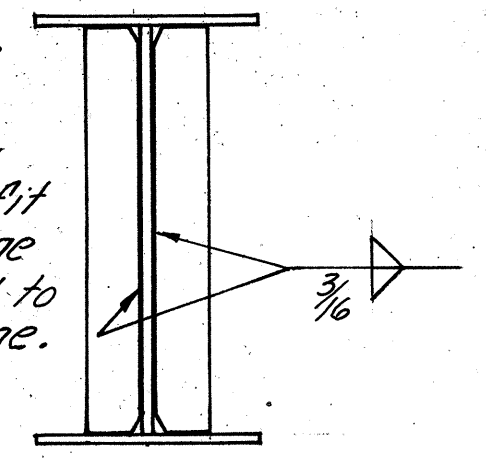


BEARING STIFFENERS
AT PIERS NO. 2, 3, 4 & 5



BEARING STIFFENERS
AT ABUTMENTS & PIERS NO. 1 & 6

Where Intermediate stiffeners are not used in pairs they shall have a tight fit with the tension flange and shall be welded to the compression flange.



INTERMEDIATE STIFFENERS
All intermediate stiffeners shall be 3/8 x 4 1/2 including those with crossframe connections (except at splice points - if required).

NOTE: High Strength Bolts shall be 1 inch diameter A325 Type 3 unless otherwise noted.

FIELD SPLICE DATA				
Splice No.	Splice Plate A	Splice Plate B	Fill Plate C	Splice Plate D
1	1/2" x 14" x 4'-2"	1/2" x 6" x 4'-2"	3/16" x 14" x 2'-1"	3/8" x 15" x 2'-9 3/4"
2	3/8" x 14" x 4'-9"	3/8" x 6" x 4'-9"	1/8" x 14" x 2'-4 1/2"	3/8" x 15" x 2'-9 3/4"
3	3/8" x 18" x 5'-11"	3/8" x 8" x 5'-11"	1/8" x 18" x 2'-11 1/2"	3/8" x 15" x 4'-3 3/4"
4	3/8" x 18" x 5'-11"	3/8" x 8" x 5'-11"	3/16" x 18" x 2'-11 1/2"	3/8" x 15" x 4'-3 3/4"
5	7/16" x 18" x 4'-9"	7/16" x 8" x 4'-9"	3/16" x 18" x 2'-4 1/2"	3/8" x 15" x 4'-3 3/4"

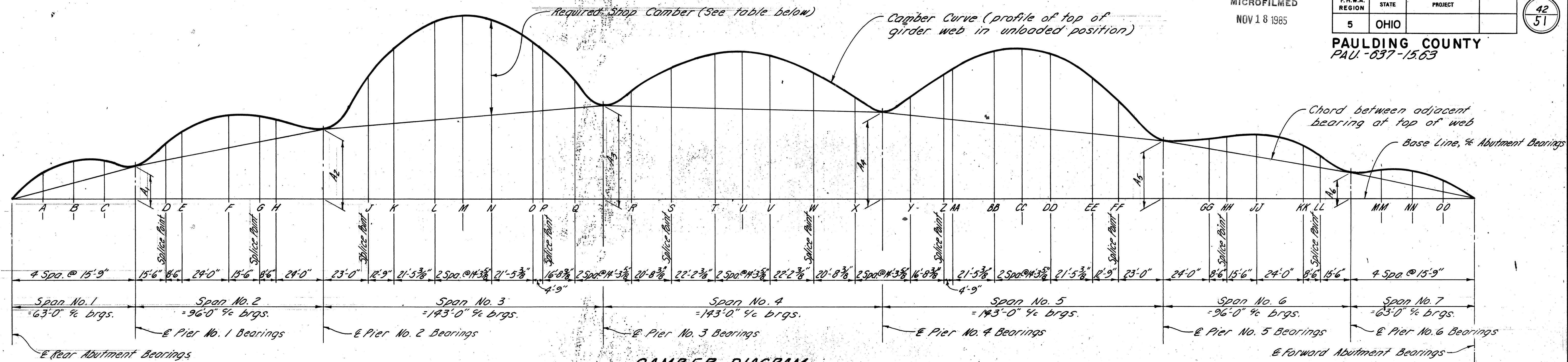
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STICKLEN - BELSHEIM & ASSOCIATES
ENGINEERS
WORTHINGTON OHIO

**SUPERSTRUCTURE
DETAILS**
BRIDGE NO. PAU-637-1569
OVER
AUGLAIZE RIVER
STA. 26+24.52
33+76.48

PAULDING CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.T.	R.D.Y.		R.G.	T.R.O.	5-30-80	D.I.C. 6-2-80



CAMBER DIAGRAM

TABLE OF DEFLECTION AND CAMBER (In inches)

LOCATION	Span No. 1			Span No. 2					Span No. 3							Span No. 4							Span No. 5							Span No. 6					Span No. 7				
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	OO
Deflection due to weight of steel	1/16	1/16	1/16	0	0	0	-1/16	-1/16	1/4	3/8	9/16	9/16	1/2	5/16	1/4	1/8	0	1/16	1/8	1/8	1/8	1/16	0	1/8	1/4	5/16	1/2	9/16	9/16	3/8	1/4	-1/16	-1/16	0	0	0	1/16	1/16	1/16
Deflection due to remaining dead load	3/8	7/16	3/16	1/8	1/4	5/16	1/16	-1/16	11/16	1/8	11/16	13/4	19/16	15/16	3/4	1/4	1/16	7/16	7/8	1	7/8	7/16	1/16	1/4	3/4	15/16	19/16	13/4	11/16	11/8	11/16	1/16	1/16	5/16	1/4	1/8	3/16	7/16	3/8
Adjustment required for vertical curve	1/2	5/8	1/2	13/16	1/8	1/2	13/8	1/8	11/16	2 1/2	3 3/8	3 5/8	3 3/8	2 1/2	2 1/4	1 3/16	13/16	1 9/16	2	2 1/16	1 15/16	1 1/2	3/4	11/16	1 3/8	1 1/2	1 15/16	1 1/2	1 1/16	11/16	13/16	7/8	11/16	1/2	1/4	1/4	1/8		
Sum of deflections and adjustments equals required shop camber	15/16	1 1/8	3/4	15/16	1 3/8	1 13/16	1 3/8	1	2 3/4	4	5 7/16	5 5/8	5 1/4	3 3/4	3 1/4	1 9/16	7/8	2 1/16	3	3 3/16	2 15/16	2	13/16	1 1/16	2 3/8	2 3/4	4	4 5/16	4 3/16	3	2	9/16	13/16	1 3/16	15/16	5/8	1/2	3/4	9/16

BLOCKING DIAGRAM

Girder No.	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆
1	2'-0 3/16"	4'-3 3/16"	5'-9 1/16"	5'-3 13/16"	3'-6 3/8"	1'-7 1/16"
2	2'-0 8/16"	4'-2 15/16"	5'-8 5/8"	5'-3 7/16"	3'-6 3/8"	1'-6 15/16"
3	2'-0 1/16"	4'-2 3/4"	5'-8 1/4"	5'-3 1/2"	3'-6"	1'-6 13/16"
4	2'-0"	4'-2 1/2"	5'-7 13/16"	5'-2 13/16"	3'-5 3/4"	1'-6 11/16"

See Sheet No. 13/18 for location of girders.

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SUPERSTRUCTURE DETAILS
BRIDGE NO. PAU-637-1569
OVER
AUGLAIZE RIVER

PAULDING CO. STA. 26+24.52
33+76.48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.T.	R.D.Y.		R.G.	T.R.O.	5-30-80	D.I.C. 6-2-80

MICROFILMED
NOV 18 1985
FILMED

FHWA REGION	STATE	PROJECT
5	OHIO	

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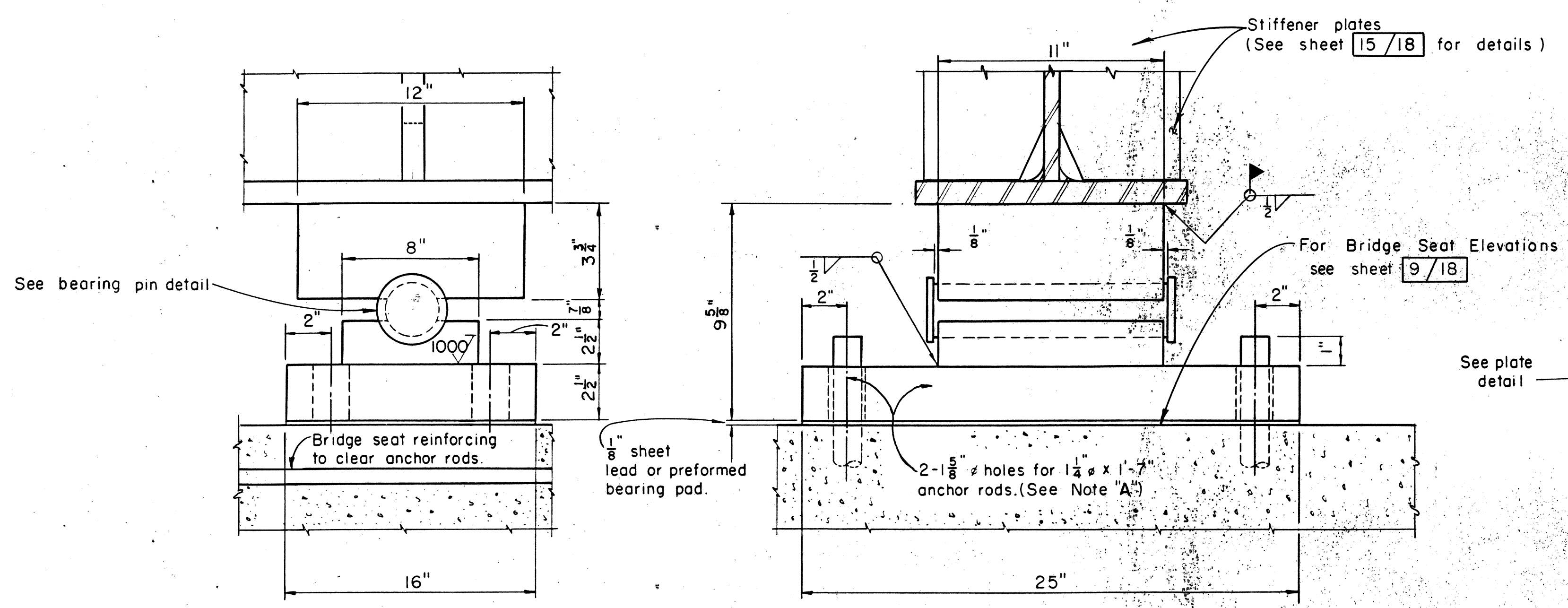
PAULDING COUNTY
PAU-637-15.63

NOTE: The lay of all tool marks in the finishing of all surfaces shall be in the direction of motion.

NOTE "A": For Bearing Plate and Anchor Rod Layout see:
sheet 5/18 for E-100 bearing
sheet 10/18 for E-200 bearing, E-300 bearing and F-350 bearing.

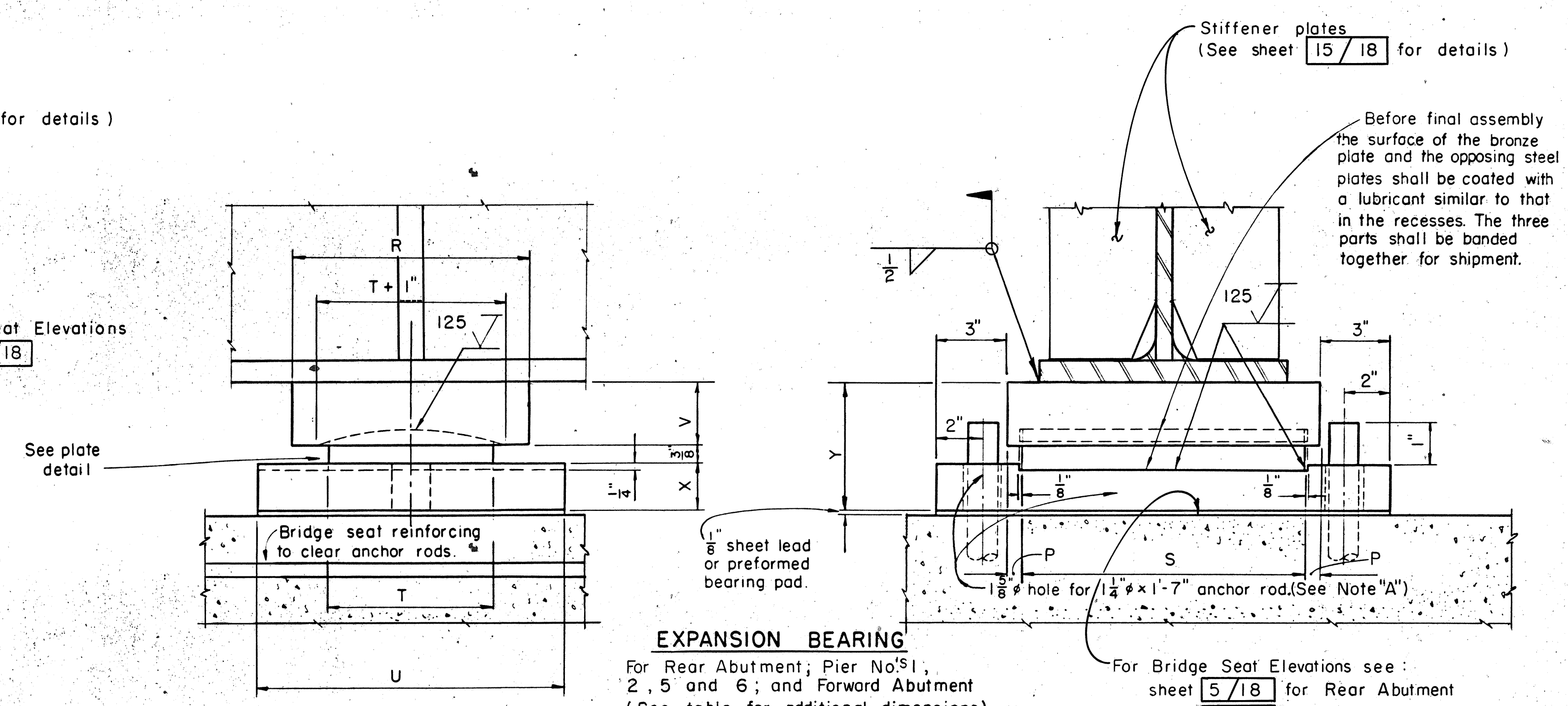
NOTE "B": The distance between extremities of recesses shall be closer in the direction of motion than that perpendicular to motion.

LATERAL EXPANSION: All bearings must be accurately placed in order that proper clearance will be provided at all bearings for lateral expansion of the superstructure.



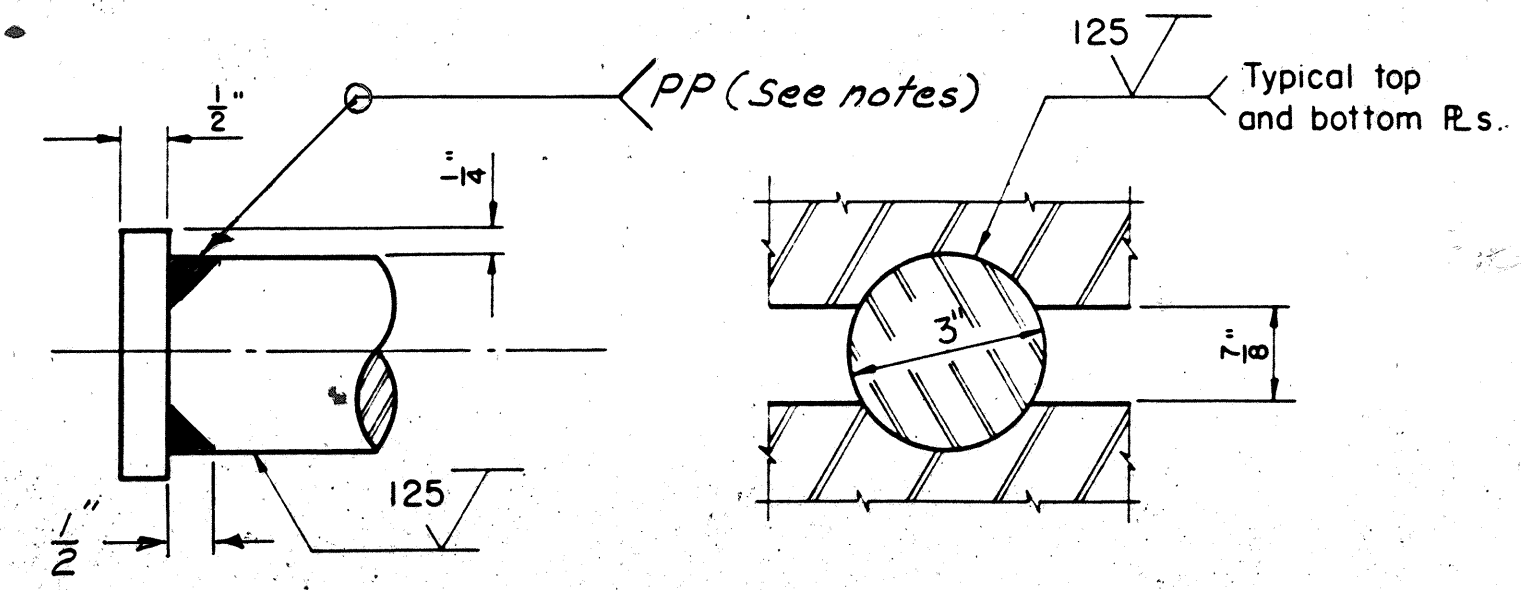
FIXED BEARING F-350
For Pier No. 3 and Pier No. 4

Expansion Bearing No.	EXPANSION BEARINGS								
	Dimensions (inches)								
	P	R	S	T	U	V	W	X	Y
E-100	3 5/8	10	8	6	12	2	1 1/8	2	4 3/8
E-200	1 5/8	10	12	7	13	2	1 5/16	2	4 3/8
E-300	2 1/8	12	15	8	15	2 1/2	1 1/2	2 1/4	5 5/8



EXPANSION BEARING
For Rear Abutment; Pier No's 1, 2, 5 and 6; and Forward Abutment
(See table for additional dimensions)

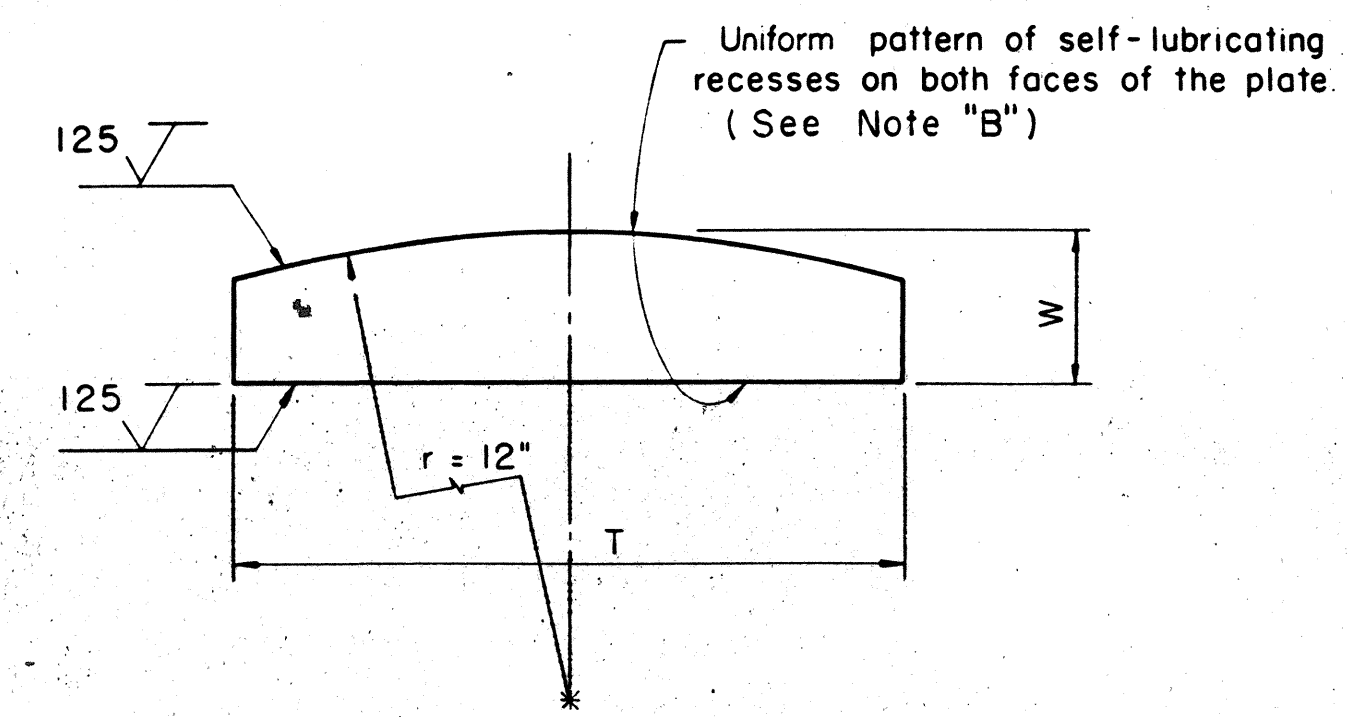
For Bridge Seat Elevations see:
sheet 5/18 for Rear Abutment
sheet 7/18 for Forward Abutment
sheet 9/18 for Pier No's 1, 2, 5 and 6



BEARING PIN DETAIL

BEARING PINS:
When the bottom plates are A36 galvanized, the pins shall be A108, 1016-1030.
When the bottom plates are A588 the pins shall be A588.
Bearing pins may be fabricated from one piece of stock or from rod stock and plates, welded as shown on the details.

Pins shall be included with Item 513, Structural Steel A588, for payment.



SELF-LUBRICATING BRONZE PLATE DETAIL

17/18

STICKLEN - BELSHEIM & ASSOCIATES
ENGINEERS
WORTHINGTON OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. PAU-637-1569
OVER
AUGLAIZE RIVER

STA. 26+24.52
33+76.48

PAULDING CO.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.T.	R.D.Y.		T.R.O.	T.R.O.	1-20-81	1-20-81

